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OSSIAN LANG, Editor.

Art Needs of Children.

The art needs of children are the art needs of to-day and to-morrow. Children are those who, tho past the days of infancy, have not yet stopped growing. The finished grown-up is—finished. There is nothing to be done for him. His culture is complete; he has no educational needs, no art needs. Very often he does not feel even the need of artifice, being quite satisfied with himself and the world as they are. The best we can do for him is to embalm him decently.

Unfortunately for the young, the direction of the growth of immature souls is entrusted in a large measure to people altogether contented with themselves. The example of these usurpers of a sacred function heightens the art needs of the young. The two great enemies of art are machinery and pretense. When both are united in educational procedure there is little hope for spontaneity which is the root of art.

Pretense when allied with that form of machinery which is called technique, may produce very clever and even shockingly effective results—modern France has exhibited many examples to the world, and Austria and Germany, too, have added not a few. But the soul of the art that lives is genuineness. Pretense is doomed. The school that discourages natural self-expression induces pretense. Sincerity and the preservation of individuality go hand in hand. The anxiety which labors for naturalness is seeking for the salvation of humanity.

The true purpose of machinery is to win for humanity the leisure needed for the cultivation of art—for culture. It becomes the giant foe of mankind when it sets itself up as the master. The ideal of machinery is uniformity. When applied to human beings uniformity suggests deception. Those who at all times look and think and act as others do cannot be true to themselves.

Think of the amount of deception which is practiced in the name of etiquette alone! Yet etiquette would regulate only how to sit, for instance, when in polite society; school machinery would add regulations prescribing where to sit, on what, and how long. The school organization schemes of some of our large cities are models of "ingenuity." Their effect is to crush out naturalness and reduce the young to so many little clocks that may be wound up in the morning and then watched carefully so that the hours are struck properly and the wheels keep moving in their proper places.

People speak of school systems, and they are right in calling them so. There is abroad a passion for system. We have "gone machine mad," as Mr. Parsons expresses it in *The Atlantic Monthly*. The clatter of the wheels may be music to the man who holds the lever, but it is not to the angels which are in heaven. Our civilization is supposed to have got beyond the monotony of the tom-tom. To be sure, new features are introduced occasionally to relieve the grind, but invariably these fall under the sway of the machine giant which seems to regard spontaneity as its chief enemy.

Spontaneity is self-expression, creativeness, and joy in one happy union. Its product is art. Technique may assume the appearance of art by copying the thoughts of artists, but it cannot deceive humanity, the humanity that lives forever. It may vaunt itself to-day, but to-morrow it will be forgotten. Only the things that ring true will live on.

Our art teachers—speaking generally, for there is an exception now and then—are not artists. They have acquired the mechanics of art and teach mechanics. Shall we blame them? The fault lies deeper. The schools run to system rather than to the encouragement of spontaneity. Art teaching as it is usually done in the schools merely follows the general trend.

Our great object of education is to supply to the young opportunities for expressing themselves creatively. It takes a sympathetic eye to discern art in technical imperfection. Such an eye the teacher ought to have. And under such an eye the spontaneity of the child will work wonders. Sincerity, spontaneity, creativeness, art,—they are all one: their spirit is truth.

How Many Ways Can One be Bad at School?

In a reform school in a neighboring State they use a red printed slip for reporting derelictions on the part of those in the process of reformation. A complete list of the offences originated in the minds of the wise managers of the institution is given below. It carries with it its own moral.

LIST OF OFFENCES.

Absent from school.
Altering clothing.
Bed not properly made.
Clothing not in proper order.
Coat not buttoned.
Crookedness.
Destroying State property.
Dilatory.
Dirty room or furnishings.
Disobedience of orders.
Disorderly room.
Disturbance in dining-room.
Disturbance in shop.
Disturbance in wing.
Eating before signal.
Fighting.
Gaping about.
Gross carelessness.
Hair not combed.
Hands and face not clean.
Hands in pockets.
Idleness in school.
Idleness in shop.
Inattentive in chapel.
Inattentive in line.
Inattentive in school.
Inattentive in shop.
Injuring property.
Insolence to instructor.
Insolence to officer.
Late at school.
Late at work.
Late ente g room.
Late leaving room.
Laughing and fooling.
Loud talk in room.
Lying.
Malicious mischief.
Neglect of study.
Not at door for count.
Not wearing outside shirt.
Not wearing slippers in chapel
Not wearing slippers in school.
Out of place.
Poor work.
Profanity.
Quarreling.
Refusal to obey.
Refusal to work.
Shirking.
Smoking.
Spitting upon the floor.
Staring at visitors.
Stealing.
Talking from room to room.
Talking in chapel.
Talking in dining-room.
Talking in lecture-room.
Talking in line.
Talking in school.
Talking in shop.
Talking on corridor.
Using tobacco.
Vile language.
Wasting food.
Wearing slippers in yard.

Oh, Education! How many offences are committed in thy name!

A Symposium on Industrial Education.

A considerable part of the present number is devoted to some trenchant statements made by a number of gentlemen well qualified to speak on the subject of industrial education. These views are particularly interesting at this season. The time is ripe for discussion. Indeed, the very meeting that called them forth is an evidence of the fast-growing attention devoted to this most important educational subject.

Industrial training has too long been neglected in our general scheme of education. It has come to be a real and crying need. Our schools have on the one side seen our apprenticeship system decline and die, and on the other, they have witnessed a vast development of mechanical resources the country over. Yet have they taken little or no cognizance of either, and have apparently felt no responsibility for the artisan who is content to leave school at twelve or fourteen, with no training directly fitting him for his life and no road open to him whereby he can get such training save the time-wasting and spirit-dwarfing path trodden by the unskilled factory hand.

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This subject of Industrial Education cannot be debated too generally or too often. It is necessary that we revise some of our current notions regarding educational practice as a whole. We are still confused by the idea that, as this is a democratic government under which we live, every child should receive the same kind of schooling.

Our practice derides our theory. We offer the same schooling to all, but we shut our eyes to the fact that untold thousands find it ill-adapted both to their capacities and their needs and are virtually forced out of school long before they can earn a decent wage. We mourn their early leaving, but never stop to question as to whether they might not have been retained in the school had they been offered work so plainly useful—so plainly profitable—that it would have been to their manifest interest to stay for two or three years more to take it, saving th reby a tedious, ill-paid—and ill-taught—training in the factory or shop.

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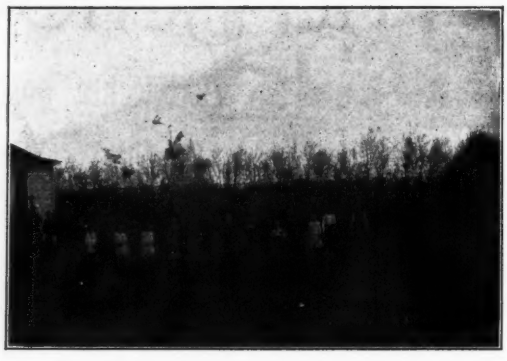
Increasing economic pressure from many foreign fields is daily pointing with increasing insistence to this question. Germany is dotted with trade schools and busy with the development of educational plans for the specific training of skilled workers. France and Italy are not idle, and statesmen in England are studying the problem with feverish anxiety, while in the mist of the Orient a giant of a nation is turning in its sleep, yawning and stretching itself and showing to the dullest that before long the Occidental worker will have to work in competition with an almond-eyed artisan of deft fingers and no mean



Flower-garden of "Rosewood" school, District No. 11, Nemaha County, Neb.
Courtesy of County Superintendent G. B. Carrington.

intelligence. Industrial education is but one way of spelling economic prosperity—it is the way in which great nations are to fight that great war which is now apace. National disarmament may come, but every machinist who stops making cannons will be set to making gears, and cams, and dynamos, and that nation whose machinists are the cleverest, whose chemists the most resourceful, whose designers the most artistic—as a whole the best trained—that nation stands to win. We live in the age of the machine—but there always must be a man behind it.

The remarkable advance made in the specialization of teachers is strikingly illustrated in the "Year Books" of the Council of Supervisors of the Manual Arts. The organization includes only those actively engaged in the supervision of the manual arts in the schools. The Year Books cover a variety of topics, all revealing the grasp that shows the hand of the expert. A review notice may be looked for in our department of book notes very soon.

THE SCHOOL JOURNAL is entered as second-class matter at the Elizabeth N. J. Post Office

Flower Beds of the school of District No. 11, Nemaha County, Neb.
This district won four $5.00 libraries at the State Fair.
Courtesy of County Superintendent G. B. Carrington.

Maple Grove School in District No. 37, Nehama County Neb.

An Industrial Education Meeting.

A meeting in behalf of Technical and Industrial Education was held Friday evening, April 27th, under the auspices of the Graduates' Club of New York City, in their rooms at No. 111 Fifth Avenue. This meeting was organized by the Club for the purpose of bringing together manufacturers, teachers, and others interested in the development of industrial education in this country. The audience was made up of representatives from all the technical and manual schools in the vicinity of New York, and a number of manufacturers from the New England States and from New Jersey and Pennsylvania. Dr. James P. Haney, Director of Manual Training in the New York Public Schools, presided. Among the speakers were: J. Ernest Yalden, Superintendent, of the Baron De Hirsch Trade School, of New York City; Mlton P. Higgins, a Worcester manufacturer, much interested in industrial education, who has done much to further industrial education in Mass.; Hon. John C. Monaghan, who as a Government officer investigated the industrial schools of Germany; and Dr. Thomas N. Balliet, for many years Superintendent of Public Schools in Springfield, and now Dean of the School of Pedagogy of the New York University.

M. Magnus Alexander described briefly the method now used in the factories of the general Electric Company, at Lynn, to train apprentices in what is practically a four years' Trade School Course conducted by the Company, and Prof. Charles R. Richards, Teachers College, and Mr. Arthur Dean, of the Industrial Department of the Y. M. C. A. spoke of Industrial Training from the schoolman's standpoint.

The Hon. John C. Monaghan of the Bureau of Manufactures, Department of Commerce and Labor, in opening the discussion spoke on "The German Industrial School System."

German Industrial School System.

By JOHN C. MONAGHAN, Washington, D. C.

[Part of Address.]

The world is moving rapidly forward along lines in which the educator is the leader. The East is entering upon the greatest educational era in its history. China has chopped or is chopping down the deeply rooted tree of its learning. The vast educational system based upon the writings of Confucius, Mencius, and others is about to give place to a system based upon all that is best in Western methods. Such success as has been achieved in this country has been due in large degree to the fact that our industrial resources have been practically inexhaustible. The fact that we have built up a phenomenally large amount of material prosperity has led people to look askance at every effort made to inaugurate a system of industrial education. Primary, secondary, college, and university education we have had in abundance. The one weak point in the system is its utter inability to correlate the lives of boys and girls to their environment. There is much in industrial and commercial life that has made, is making, and is long destined to make for the progress and prosperity of all. To make the most of all the world offers we have to apply that form of education that secures the best results. One evil of our present system is its tendency to unfit boys for life or for life's work. The education advocated by the friends of industrial education is calculated to make a boy love his work. Take, for example, the farmer's son who gets a good training in the chemistry that touches farm, orchard, vineyard, hennery, or stable. I hold that such a boy will not only be a better farmer, but that he will be a better man.

In the workshop to-day a little more than mere mechanical skill is demanded. The man in the factory or on the farm who has added knowledge to his skill is in a position to command success. Experience teaches that the wages of such a man are sure to be higher than the wages of the man who has limited his studies to questions of skill. High wages go to skilled labor. The marvelous successes that the German Empire has experienced in recent years is due in a very large degree to its industrial, industrial art, and kindred schools. When told, as you have been told, and will be told again, that the Germans are theorizers, go to the wonderful schools in the Empire, particularly to the dyeing, tanning, textile, jewelry, and other schools and see how practical they are.

Let us consider the jewelry school at Pforzheim. The school is built like a Greek temple. It is perfect in its architectural form and in its equipment. It is divided into two parts, the industrial, and the industrial art branches. Into the first go all the boys, and by a process of selection, so characteristic of the Germans, the bright boys, those manifesting talent or the tendency toward artistic expression, sometimes dignified by the name of genius, are lifted out of the industrial into the industrial art classes. The German method precludes waste, or at least much waste, and it saves boys and girls from the humiliation consequent upon failure. In industrial schools

Pottery in the Union High School of Grand Rapids, Mich.—Filling the Molds.

the boys and girls get enough of the practical to preclude losses. They learn just enough about metallurgy, about solders, their use and abuse, etc. They get a fairly good course in blowpipe work. When they enter the school or factory they are put at a bench by the side of well-trained mechanics. The success met by the Black Forest factories or jewelry shops is as interesting as it is instructive and suggestive.

What the other industrial schools have meant to the Empire is manifested in so many ways and along so many lines that one has to hesitate in choosing concrete examples for illustrations. Take beet-root sugar. At first the yield was 3 to 4 per cent.; to-day in Germany on the plains of Magdeburg, thanks to the Empire's schools and experiment stations, there are acres of beet-roots where the yield runs as high as 23 per cent. and whose general average is 14 or 15 per cent. And yet there are those who tell you that all this talk of industrial, and industrial art education is theory—a fad. It is the hardest kind of fact, it is the bed-rock bottom on which the German Empire has built up the wonderful system that has secured results the record of which, all things considered, reads like a romance. It is a system that is sure to commend itself just as soon as its successes have been seen.

View of the Lawn of Canterbury Street School, Worcester, Mass.
Homer P. Lewis, Superintendent.

The industrial and industrial art schools have demonstrated their *raison d'etre* in other countries; they will add wonderfully to the effectiveness of this Republic industrially and commercially, once they are successfully introduced. They will teach boys and girls to love their work. They will go a long way towards solving the great sociological problems. They will stop the tide that is tending towards a disheartened, discontented, disturbing proletariat recruited from the ranks of high school graduates unable to earn a living because they lack the capacity to do anything desirable, and because they lack a love of work and are averse to toil of any kind that results in dirty fingers or dirty clothes. These schools are the great need of the Nation, now. As the years pass the need will grow greater. What is needed is a system that will put the industrial and industrial art schools as near to the people as the common school is now.

Dr. Thomas M. Balliet, dean of the New York University, School of Pedagogy, spoke on "Technical Education in High Schools."

Technical Education in High Schools

By THOMAS M. BALLIET, New York University.

Technical education began at the top in this country. We have probably quite enough technical schools of collegiate rank to supply us with engineers. The great need of to-day is technical schools of the rank of secondary schools in which may be trained that large class of men who come between the engineer and the skilled workman. Such schools should train men for positions as foremen and superintendents in manufacturing establishments. They should be day high schools with four year courses, giving besides the purely literary training, training of the ordinary high school, thru instruction in mathematics, mechanics, physics, and chemistry, in their applications to the various industries. They should teach mechanical drawing and freehand drawing, including designing. They should require daily shopwork thruout the course, to give a student the principles and many of the details of practice in a number of the trades. No higher technical school of a college grade does or can give enough shop practice to qualify a man to direct the work of skilled mechanics. The present manual training high school can easily be transformed into such a school without any disadvantage to the general educational quality of its work.

Such technical schools should also have broader aims. It should fit for higher technical schools. It should open its doors as it does now to students who want to take manual training solely for its educational effect. It should train men to represent large manufacturing industries, as agents for the sale of manufactured goods.

The technical high school should, in short, bear the same relation to the literary high school which the higher technical school bears to the literary college.

There is need of evening technical schools corresponding to our ordinary evening high schools in grade, but differing from them in character and aim. These should give the most intelligent of skilled workmen, without interruption to their daily work, an opportunity to acquire the necessary scientific and technical training to fit themselves for positions as foremen and superintendents. Germany has a great many schools of this character as evening schools, besides the numerous trade schools.

Mr. J. Ernest G. Yalden, superintendent of the Baron De Hirsch Trade School, of New York City, spoke on the problem of "Industrial Education."

Industrial Education.

By J. ERNEST G. YALDEN, New York.

Systems of industrial education aim to fit youths to enter those particular vocations to which they are adapted by natural capacity and economic circumstances, and no one system can meet these requirements. To meet the requirements of training for all classes of industrial workers, schools of various kinds must be provided. These schools may be divided into three classes as follows:

First. Schools to prepare those youths who are fitted to enter industrial pursuits as apprentices, and who will ultimately become and remain mechanics. Such schools should be designed to take the place of regular apprenticeship in shops, and I will term them Apprentice Trade Schools.

Second. Schools to provide those of more mature age who are serving a term of apprenticeship at a trade, or have completed a term in an Apprentice Trade School, with a training designed to give them a better understanding of the theory and principles involved in the practice of their trade, with possibly some practical work as a means toward that end. This training would serve to make them better journeymen, and to assist and fit the more capable among them to become foremen or shop superintendents. These schools should be somewhat of the nature of the continuation trade schools so common abroad. I shall term them Journeymen Trade Schools.

Third. Schools to fit those of our youth to enter industrial occupations, who are better qualified to benefit by a much longer and more complete system of training, by reason of natural capacity, a more thoro previous academic training, and by economic circumstances that permit them to prolong the period of preparation for work beyond the usual time allotted to many. Those completing this course would have the equivalent of the work given in the Apprentice and Journeymen Schools, and tho fitted to start work only as apprentices or helpers, such an extended training with its broader educational foundation, would better qualify them for rapid advancement beyond the grade of journeymen to that of foremen or shop superintendent. Schools of this type I will term Technical Trade Schools.

I shall not add a fourth class, namely, Technological Schools which aim to provide training for scientific men and engineers, as that training is professional rather than industrial, if I may be permitted to make such a distinction.

While we are now fairly well supplied with schools approximating very nearly to the types of Journeymen Trade Schools and Technical Trade Schools, and the tendency appears to be in the direction of establishing many more of that character, it is to the scarcity and greater need of schools of the Apprentice Trade School type that I particularly wish to draw attention.

Such schools would give an opportunity to a much larger number, who, because of the necessity of sacrificing too long a wage-earning period during the necessary training, are prevented from changing an unskilled occupation with its small wages, for a skilled trade with its larger reward.

To meet the needs of this class the State should, to be consistent and just, establish schools somewhat of the type of the Apprentice Trade School.

The Apprentice Trade School as a supplement to the elementary school will properly and sufficiently train our youth to become good mechanics. While such schools are to some extent intended to take the place of the old apprenticeship system, they cannot and should not attempt to accomplish the same result.

The aim of the Apprentice Trade School should be to provide this fundamental training in as short a time as possible, thereby enabling youths to enter trades, and ultimately become journeymen mechanics.

To make these schools of real benefit to the community we must, by a careful selection of pupils; and a rigid insistence on earnest and thoro work; maintain such a standard of efficiency on the part of the graduates, that employers of labor will prefer; and perhaps finally insist, that all those seeking employment in skilled trades shall have had a preliminary training in an Apprentice Trade School.

Mr. Milton P. Higgins, president of the Norton Emery Wheel Co., of Worcester, Mass. spoke on the "Education of the Mechanic."

Education of the Mechanic.

By MILTON P. HIGGINS, Worcester, Mass.

Any scheme for industrial education that meets the needs of the manufacturer must provide for two elements in the same mechanic, skill and science. The workman must have his primary schooling supplemented by a very practical working knowledge of mathematics, physics, and drawing. This part of Industrial Education is quite possible in the public schools. In fact the common school is doing good work, and is doing it better and better each

"Bird Fountain" of the Downing Street School at Worcester, Mass.

year. The schoolmaster is wide awak: for improvements, and is able and willing to make his teaching more vocational. We need not worry about the school-book work of our future skilled mechanic, if we can secure for him all the public school can give him.

The trade that was formerly taught the apprentice in close relationship to his master must now be taught to classes in trade schools established eithe r within large commercial works, or in trade schools independently organized for the direct purpose of teaching the skill of certain trades.

The trades at first demanding such a school are the *machine trades* for machinists, pattern-makers, and foundrymen. These are fundamental trades. Trade schools within large commercial works are showing great possibilities in educational work. But very few such works are able to undertake so much. Modern methods of manufacturing are not adapted to teaching beginners, and very few men are able to organize a training department of this kind.

But a training shop for such trades as above mentioned could be organized as an independent enterprise, with every assurance of success. Such a training school would be incorporated for the one object of teaching trades to boys who are attending the public school half of the hours each week. One-half of the class would be in the training shop while the other half of the class was in the school, alternating five times per week. Thus the number in the school and the number in the training shop should remain uniform and continuous. The age for beginners would be fourteen or fifteen years.

The shop would be conducted on a productive commercial basis and would be largely self-supporting. The pupils would go out at the end of a four years' course skilled mechanics worth from two to three dollars a day, with a good education, and hence a good prospect of advancement.

A great many efficient boys would be induced to continue in the public schools, if they could see at the end of four years that they could enter the industrial field wlth skill and training and would be in demand at good wages.

Mr. Magnus Alexander spoke on the apprenticeship system which has been developed by the General Electric Co., of Lynn, Mass.

A System of Apprenticeships.

By MAGNUS ALEXANDER, Lynn, Mass.

It would be correct to state that the "old" apprenticeship is dead; so are the old methods of manufacture and the old factory systems. A new method of manufacture and a new factory system have come into existence under the modern industrial conditions, and have necessitated a "new system" of apprenticeship.

The General Electric Company at West Lynn, Massachusetts, has given serious thought to this matter for the last five years, and has developed an apprenticeship system along lines which have proved very successful. Boys of sixteen years of age who have had at least a grammar school education are indentured to learn one of the many trades which are practiced at the Lynn Works of the General Electric Company.

Applicants have to serve a trial period of from one to two months, during which time they are under the closest scrutiny of a man well qualified to observe the general make-up of the boys. Only those, who, during the trial period, give promise of becoming good artisans with a fair expectation of being able to occupy, at some future time, leading positions in the factory organization, are allowed to sign the regular apprenticeship agreement. This provides for a

Primary Children Planting Sunflowers—Bloomingdale School, Worcester, Mass

service of four years, during which time apprentices are paid fair wages along a progressive schedule and are given every consideration in order to teach them the mysteries and arts of the particular trade to which they have been indentured. The wage scale is set so that each boy can be self-supporting from the beginning, even during the trial period. In round figures, apprentices are paid during the trial period and the first six months $4.50 per week; during the second six months $5.60 per week; during the second year $6.70 per week; during the third year $7.80 per week, and during the fourth year $9.25, with $100 cash bonus at the successful termination of the apprenticeship.

The aim of the General Electric Company is not only to develop skilled machinists and tool-makers, carpenters and pattern-makers, iron, steel, and brass molders, instrument makers and electrical workers, etc., but also to develop a class of artisans from whom men for leading positions in the factory may be chosen for assistant foremen, foremen, master mechanics, and superintendents.

The modern industrial conditions with their specializing tendencies have introduced complicated specializing machinery, which often can be manipulated only by operatives who have achieved skill in the handling of that particular machine. These conditions, however, have called for a new type of employe, one who can not only operate the complicated machinery, but who also understands the nature of the machine, how to doctor its ills, and to provide it with the auxiliary tool equipment that is necessary for the performance of some specific operation. To occupy such responsible positions, therefore, not only requires dexterity of hand but also industrial intelligence, which the Massachusetts Commission on Industrial and Technical Education has defined as:

"The mental power to see beyond the task which occupies the hands for the moment to the operations which have preceded and to those which will follow it,—power to take in the whole process, knowledge of materials, ideas of cost, ideas of organization, business sense, and a conscience which recognizes obligations."

The theoretical school of the General Electric

Company in contra-distinction to the trade school, of which I shall speak later, consists of seven terms of twenty weeks' duration each, two school sessions being held per week, each session lasting two and one-half hours. The course of studies covers Mathematics, Physics, Technology and Mechanical Drawing.

All problems are of a concrete nature and deal with materials, apparatus, or pieces thereof which are used in the factory. The teacher has always before him the piece of material, the apparatus, or part thereof, of which he speaks, and explains briefly to the students the nature and the use of the object. The apprentices obtain thus an early insight into technology.

A large portion of the time is devoted to mechanical drawing, which is considered a very important subject. First a brief course in free-hand sketching is given. It is realized that the art of free-hand sketching of geometrical figures is not sufficiently developed in our schools nor even in our higher schools of technical learning, altho it is a very important equipment for any one engaged in industrial pursuits whether he is a skilled workman or a foreman, a superintendent or an engineer.

Then follows a course in mechanical drawing, which includes instruction in descriptive geometry, and is in turn followed by a course in machine design. Here the pupils are given parts of machinery, such as bolts and screws, shafts and pulleys, terminals and pieces of like description and are obliged to measure these parts by means of a caliper, scale, and micrometer, to make free-hand sketches and dimensions then, and from these sketches make regular mechanical drawings with elevation, plane, and cross-sectional views. The last, and from our standpoint, the most important part of mechanical drawing, deals with "tool design," or the ability to design the auxiliary tool equipment required for specific operations. During the last term in the theoretical school, lectures on the care of machinery, stock-room methods, factory organization, etc. are given. Hand in hand with this school instruction goes the practical instruction in the shop. Realizing that some of the shop foremen are not fully qualified to impart knowledge and are not always in a position, due to business conditions, to give the apprentices the opportunities that will lead to the quickest and the best development of the boys, we have established a training room in our factory which, I believe, is the best example of a trade school. This training room is a separate shop in the big factory organization, presided over by a man who is eminently qualified by training and capacity to initiate the boys into the trades. He is an ingenious mechanician, who has, himself served an apprenticeship, who likes to handle boys, and who knows how to do it.

After about two years' service in the training room, apprentices are detailed to various factory departments, serving the last two years as a post-graduate course in the factory, acquiring here greater skill and accuracy and the ability to meet emergencies as they arise. We have about 200 apprentices in our course and feel satisfied with the results so far attained.

General Discussion.

By CHARLES R. RICHARDS, Columbia University.

The most impressive fact about the whole problem of industrial education is that it is first of all an economic and not an educational problem. When we face the question of training the actual hand workers in any industry, we face the problem of gaining time for instruction for those who cannot afford to be without some means of support for any great length of time beyond the compulsory school age. Any real solution must consist in reconciliation between these two elements of instruction and support.

Present provision as to trade schools and opportunities for entrance to all high grade industries are limited to boys of at least sixteen years of age. The boy who leaves school either at the compulsory school age or earlier and goes to work, is the greatest sufferer from present conditions. Such a boy finds openings only in low grade and unskilled industries where opportunity for advancement is very limited. He remains at narrow and restricted kinds of work or drifts about during the most susceptible period of his life.

Investigations by a Massachusetts Commission on Industrial and Technical Education that has just published its report show that seventy per cent. of families to which such boys belong can afford to keep them in school for two years longer, and desire to do so if industrial advantages would follow.

Public industrial schools taking the boy between fourteen and sixteen years without necessarily waiting for him to graduate from the elementary school, which would devote a large amount of time to practical work in specific industries, would not equip with full trade efficiency, but would cultivate manual skill, develop industrial intelligence, and prepare the boy to take full advantage of future opportunities. Such schools would immensely increase the economic value of the graduate to any industrial employer, and greatly enhance his chances for entrance to a high grade industry.

Remarks by Arthur D. Dean, General Supervisor of Industrial Work for the Y. M. C. A.

The recent report of the Commission on Industrial and Technical Education in Massachusetts brings before the public definite information in regard to a problem which has long concerned educators who are interested in the industrial side of life. The Commissioners investigated particularly the years of the working child from fourteen to sixteen to find out what these years in industrial life meant to the child and what their value might have been. They aimed to secure the point of view of the boy and the parent, and that of the employer and the superintendent of schools. It was discovered that these three or four years of a working child's life are practically wasted so far as productive value or efficiency is concerned, that any scheme of education which is to increase the product-efficiency of a child must consider the child of fourteen, and finally that the education which fits a child best for his place in the world as a producer tends to his own highest development, physically, intellectually, and morally.

These children early lose touch with the public schools and the only method of reaching them is thru supplementary education, that is, thru courses of study in the evening school which make up their deficiencies in fundamental education.

This supplementary education undertakes to give the worker what he needs. Its purpose should be the awakening of a child to a sense of his intellectual needs, and the cultivating an appreciation of right living. It should fit him for improved service in his work or should turn him to lines of activity for which he is better adapted. It should serve to keep awakened past educational experiences and should broaden the economic needs into the cultural.

The various features of such a school system must be elective and flexible, adaptable to the intellectual special and transient needs of the student. These features must be presented in small units, and sequential arrangement. Thruout, the aim must be to increase the child's capacity.

The Young Men's Christian Association's "Employed Boys' Educational Course," which has been recently embodied in the educational work of the Association thruout the United States endeavors to meet the needs of these boys upon whom the Commissioners' Report places so much emphasis.

Educational Notes on San Francisco and Oakland.

By Mary Richards Gray.

The school children of the United States of America have asked to assist thru voluntary contributions in the rebuilding of the public schools of the stricken city of San Francisco. The suggestion came from the superintendent of schools of the city of Galveston, where the schools were rebuilt with money collected from the school children of the country after the flood of 1900 which did such awful damage there. In behalf of the city Superintendent Roncovieri accepts this generous offer. During the week a number of contributions came in, the first being $3,000 from Indianapolis. Chicago has sent word that her children are busy collecting funds for the children of this city. Other cities large and small all over the country are engaged in the same good work.

The schools were San Francisco's pride in more than one sense. Two million dollars had just been appropriated and plans were under way for the building of twenty-two new school-houses, eighteen of which were primary schools. The normal school was to be removed and established in beautiful new quarters with a detached gymnasium, and handsome assembly hall. Twenty-nine of the schools were utterly destroyed; forty-four are still standing, but as their condition is not known it will be a long time before all can be inspected, repaired, and reopened. With these buildings as with all others, there must be a strict inspection of sewerage, water supply, and chimneys, to say nothing of walls and roofs. The Ocean House Primary School was partially thrown from its foundations, the Girls' High School, one of the finest buildings in the city, was so badly damaged that its rebuilding will be necessary. Only the walls remain of the Lincoln School, and the statue of our martyred President which was erected in front of the school shortly after the Civil War, was smashed to atoms.

The Normal School of San Francisco opened in temporary quarters in the Grammar School Assembly Hall, at Grove and Eleventh Streets, Oakland, on May 7. As soon as possible the school will be removed to San Francisco. It is hoped that the change can be made by July first.

The Board of Education at its recent meeting adopted a resolution to the effect that any teachers desiring a leave of absence for a week would be granted one, provided the leave did not extend beyond the time of the opening of the fall term of 1907.

Superintendent Roncovieri last week was instructed to delegate six teachers to assist Labor Commissioner Stafford in registering mechanics and laborers at the Hearst School. The Red Cross Society on the 30th of April asked all teachers who could to volunteer to do clerical work in keeping account of supplies distributed to the needy at the various relief stations thruout the city. Many responded to the call.

Tho there are a number of schools which can be made ready to open within a short time, this is not thought to be advisable, as many parents are extremely nervous on the subject of earthquakes and do not want their children in high buildings. There have been something like seventy earthquakes here since the one big shake of the 18th of April. Is it any wonder that everybody has nerves? The suggestion has been made that schools be opened in tents in the parks, but no action has been taken as yet. The work of reorganization is so stupendous that the people scarcely know where to begin, or what to do first. The feeding and clothing of 200,000 absolutely destitute persons comes first, naturally.

It has been decided to pay the teachers in full for the month of April but what funds there will be after that remains to be seen. The teachers as well as pupils are scattered to the winds of heaven, for as many as could fled from the city at the first opportunity.

Under the State law the amount of money appropriated for the schools depends upon the number of pupils attending, hence San Francisco is anxious for as many as possible of those scattered over the country and intending to return to register as San Franciscans, that the city may obtain her just share of the money.

So far only two deaths have been reported among teachers and in each case the person dying had long been ailing. The direct cause of death was not the earthquake and fire, tho the shock may have hastened the end.

In the refugees' camp at the Presidio where the writer spent the eight days following the earthquake and fire, her nearest neighbors were some people from the Mission who had fled from a falling house and lost everything. Their only child was a deaf mute on whose account they had removed from Texas to San Francisco that he might have the advantages of one of the finest schools for deaf children in the country. Here he made such marvelous progress that he was the show pupil of the city. During the days of misery following the wrecking of their home the parents thought and considered little but the future of this boy, now seven years of age. Their whole problem was where they should go to get for him the training that he needs. The father, a foundry worker, was sure of work of some sort, if only clearing away debris at $2.00 a day. Finally, they decided upon Oakland, and at present the boy is in the department for the deaf at the La Fayette School, the first which was opened here, and which is held in a low, one-story, detached building.

The most of the Oakland Schools opened on May 7. The earthquake here lasted only twenty-eight seconds, and while it did a great deal of damage, it

This picture shows something of the dreadful desolation of a district destroyed by the recent earthquake in San Francisco. Here were several schools which are now in ruins.

was as nothing compared with that in San Francisco, where the shake lasted for forty-eight consecutive seconds.

As all school records were burned in the office of the Superintendent of Schools, teachers have been asked to file at the temporary offices of the Board statements of the number and kinds of certificates they held.

Much to the regret of Californians the great meeting of the N. E. A. which was to take place in San Francisco in July has been given up. Oakland, Berkeley, and Los Angeles offered to do all in their power to entertain the teachers of the country, but it was deemed wise not to accept the hospitality of any one of these cities.

At San José where conditions are quite as bad, if not worse than in San Francisco, the high school, and three elementary schools opened on May 6. The buildings of the high school were so badly wrecked that temporary quarters are being used in one of the grammar schools. The salvage from the wrecked buildings will reach approximately $16,000.

Vacation schools are also being talked of, to be established either in tents or temporary one-story buildings in the parks.

On the day following the earthquake and fire the school children of Ogden were dismissed at half past ten o'clock in the morning to help collect supplies and get ready the first train that went out from that city. Some of the primary school children of Smyrna, Delaware, sent one hundred and fifty pennies and the following letter to Governor Pardee:

"Dear Governor Pardee: We little primary folks in Smyrna are very sorry for the little girls and boys of San Francisco, so we send you some of our pennies. Please use them to help build a school. We have all been looking at the dreadful pictures in the papers all the week, and altho we are away over in the 'Diamond State,' we pity our Golden Gate brothers and sisters. Every little will help."

To this letter were signed the names of twenty-seven boys and girls in childish handwriting.

Reciprocity in Education.

By Principal M. F. Andrews, Cincinnati, Ohio.

Not long since a gentleman with whom I have a speaking acquaintance was imported from an Eastern State to take charge of a new department in a large Western city. The first thing the man thought of on his arrival, of course, was a place to lodge and the where-withal to eat. It was necessary for him to explain why he was in the city and to name the Superintendent of Schools as a reference.

Imagine his surprise at the attitude of these people of whom he asked "a night's lodging and a cup of cold water." "Why was it necessary to go out of our own city to find a man to do this work?" "Was there not some one here who could do it just as well?"

A few months ago the local papers of an Ohio town boasted that every teacher in their schools had been educated at home, i. e., was a product of their own schools and had no other training. Commendable in the eyes of the editor, that the Board should employ home talent. From these two instances it can be seen at once the feeling on the part of the public on this important question.

When a man has taught successfully for a dozen years, it should count to his credit in a new position. For a dozen years I have watched the appointments in Cincinnati and in that time more than two dozen men have come into the system from the contiguous towns and township schools. With one exception these men have succeeded.

There has usually been heard the cry, that these men ought to demonstrate their ability to discipline city children, before receiving full salary. The rules of our Board distinctly state that "experience shall be taken into account by the Committee on Teachers and Salaries upon the first appointment," etc., etc. This is as it should be, and should be carried out to the letter.

It has been said that these men were given a preference over the college men, and the statement may be true. I think if it were a choice with me between the successful experienced candidate, and the raw, untried college graduate, that my vote would be in favor of the former.

I remember once meeting with a committee while it considered the advisability of appointing two men to positions, who had worked for a dozen or more years in village schools. One member of the committee took the ground that it was not fair in any sense of the word to bring these men into our system to the detriment of our own young men who had graduated from the University. These two men "had demonstrated their ability" to manage schools and to give instruction. In time the University graduate might do as well, or even better than either of these men. But what of the present? Shall experience count or shall it not? Shall our children have the privilege of being taught by men who have been tried and not found wanting, or shall we establish experiment stations and use our children to equip the workshop?

This same committeeman finally voted to confirm these appointments, but succeeded in having their salaries fixed at the minimum.

It would be far better for our home-grown graduates to go out into the world and teach; on the other hand it is worth much to a system of schools to have injected into it continually plenty of new blood.

Again, examinations show little concerning a man's ability to teach. Of course, this has been said over and over again, and will have to be repeated an infinite number of times before it soaks into the head of the average school committeeman.

Scripturally speaking, "by their works ye shall know them," and that is about all there is of it. An applicant might pass the usual examination with splendid grades, and not be able to teach anything. Another applicant might fail ingloriously in the examination and yet be a very successful teacher. This is an old preachment, but we will have to keep it up.

Only by this morning's mail came a letter to my desk from an old classmate of mine—so long, oh, so long ago, that I do not remember how he looked, asking me to recommend him to our State Board of Examiners. Of course I did it and was only too glad to do him the favor. He was all right years ago and I am sure he has improved with age.

For years he has been teaching successfully in California, and holds a life certificate from the Board of that State. That should entitle him to a certificate in Ohio.

After a man demonstrates his ability to teach he should be given a license, and that license should be a professional one—good in Ohio, Texas, or Wyoming.

A friend of mine who is a graduate of one of our medical schools in this State, is practicing in one of the inland towns, and is succeeding splendidly. Last month he went down into Oklahoma and was so pleased with the outlook that he concluded to stay. The only thing required of him was to register, pay his fee, and present his diploma. Why should I be held up and compelled to take an examination?

Shall Married Teachers Teach?

By Supt. William E. Chancellor, Paterson, N. J.

The persons employed as teachers and qualified by education to teach are but a small proportion, for the whole United States about one in five, for certain progressive States about one in two, of the total number of persons teaching. Yet in almost every town and city in the land as soon as a woman teacher, whether qualified or not, is married, she must resign. If later she becomes a widow, she may possibly become again an employed teacher.

As a general truth, the women teachers whom men select as wives are intellectually and emotionally superior to those who remain unmarried. There are no doubt conspicuous exceptions. Women of brilliant mind and self-assertive character do not form a marrying class whether they are teachers or not. But the educated women who are willing to accept husbands are nevertheless as a class more vigorous and versatile, more sociable and generous than those who desire to continue single.

There are of course, not a few women teachers who do not marry because of the strength of family responsibilities. But there is less in this objection than appears, for many do marry despite equally insistent responsibilities. Marriage is essentially a setting aside of family interests, a going out from the parental home, and the assumption, more or less blindly, perhaps, but none the less boldly, of new responsibilities. In civilization, there is often, very often, the color of selfishness in marriage. And yet there is perhaps no other of the adventures of life more perilous to self-interest, as there is certainly no other so alluring or so benign in its possibilities.

Unless the foregoing propositions are erroneous, they serve as an adequate foundation for the conclusion that we cannot afford to dismiss teachers for the fact of marrying. The schools of America are none too good to-day. Every good teacher dismissed means the possibility of a poor one in her place and the probability of a younger and less experienced teacher. Thus with every such teacher leaving the school service, the average quality of instruction tends to be lowered.

But, it is rejoined, some poor teachers are dismissed as well as good ones. This is no doubt true.

And again, it is asserted, marriage may lessen the power of the good teacher to teach well. This also is true.

Upon these two propositions the advocates of the present policy of penalizing marriage by dismissal or forced resignation rely for justification.

It is often said that women teachers have "as good right" to teach, tho married, as men have. This proposition of the same human rights for male and for female is not debatable. It denies sex. In fact, the married woman has a better right than the single.

On the contrary, those who favor the present policy sometimes add that for married women to engage in daily economic work away from the home is against sound public policy in that it tends to destroy home and family. This is not altogether true. A mother with husband and three or four children, who adds (say) six hundred dollars a year to the family income by a cultural employment, may be able by reason of that income to do more to develop the family life than the mother who must "get along" without this additional sum.

"A good teacher," my beloved college teacher, Prof. Charles E. Garmean, of Amherst College, said recently to me when we were talking the matter over together, "is too precious a product to be wasted." This seems to me to rise to the dignity of a principle. Why should a woman trained to teach forty or fifty children and able by that training, added to natural gifts, be forced to limit her attentions to two or three or six of her own blood? One of the very best teachers whom I ever supervised was a grandmother who as a widow had brought up a family of children by service in school. And the very best kindergartner whom I ever knew was a mother, fifty years of age, whose husband was a civil engineer, but who had taught nearly all of her married life.

Delivery Room of the De Kalb Branch of the Brooklyn Public Library.

Children's Room of the Flatbush Branch of the Brooklyn Public Library. Frank P. Hill, Chief Librarian.

In my experience as a superintendent, I have lost, because of marriage, about one in three of women teachers under twenty-six years of age and one in eight or nine of those from twenty-six to thirty. For women teachers the marrying ages are twenty-three, four, and five. They teach for two or three or four years after leaving the normal school, and then, if at all, they are married. Often they teach mainly to earn and to save money for an intended marriage, for many engagements date before normal school graduation. To raise the salaries of these young women is simply to hasten marriage. On the other hand, to raise the salaries of women over twenty-six or-seven years of age is to delay marriage or to set it entirely aside, for these marriages are not nearly so apt to be of romantic origin. I applied this principle rigidly in the new salary schedule of this city.

The teachers lost because of early marriage generally marry well, marry better, let it be said, than the few who marry late. They marry young men who, of course, must face the many fatalities of life, death by sickness and by accident, invalidism, business failure, and moral delinquency in the maze of a difficult civilization.

At marriage, most of them are glad to give up teaching, but within six, eight, or ten years, a certain proportion of them would be even more glad to resume the activities of their profession. These may

Children's Room of the South Branch of the Brooklyn Public Library.

be resolved into two general classes: First, those who have large natural abilities, but have taught only two or three years. Second, those who have less natural ability but have taught six or eight years.

I submit that in every ten of such candidates for return to teaching there will be three or four persons equal in every respect to the best teachers in any town or city force, whose employment means the displacement of decidedly inferior candidates not married. In other words, our schools need these teachers. In one respect, motherhood, they are incomparably superior to all other teachers.

We admit quite generally that it is fitting to employ widows who are teachers by training but many of us balk at employing married women. Three reasons are given. First, that their children absorb their interests. Very likely they do. But they also enrich the mother's soul for this very reason. I would that my own children might have at school only teachers who were mothers pedagogically trained. But even one mother in ten teachers upon a school faculty would be able to do far more to influence the other teachers to maintain sympathetic relations with their pupils than can the principal, who should, of course, be a married man and a father. Second, it is asserted that the married woman is too much under the authority of her husband to take orders implicitly from school authorities. Not in America. Let it be remembered that there still lingers in the soul of American men a proud and perhaps a vain desire to "support" their wives. The man who cannot do this and, therefore, "allows" his wife to teach will not desire to interfere, while the man who is emancipated from that notion will rather encourage his wife to do whatever is necessary to true success as a teacher. The third objection relates to the arrival and the care of children. In those schools where married women are already employed this question has not the significance attaching to it in faculties composed entirely of unmarried teachers. In respect to pupils it has, of course, no significance at all as it certainly has none in a society of adults. A few rules and the common sense of superintendent and principals will dispose of all such matters properly and in season.

It certainly is a grievous pity that the American stock loses in every generation the children of those intelligent women who in balancing the sometimes anxious question whether to marry in poverty or to teach in single comfort choose the latter state.

Why should not the woman teacher who has prepared herself look forward to a life work in the profession of teaching whether she is married or not, quite as much as the woman physician, lawyer, or minister? Does not the present custom of cutting off her career because of marriage tend to regarding the work in the two or three years after normal school graduation as a makeshift, a pastime, a trivial short term mode of filling in a gap? Let us rather make teaching a life profession for woman as well as for man.

It is safe to say that half of the women who marry in a school system permitting married women to teach resign irrespective of the rule, while the other half remain. Those who love to teach and those who marry poor men continue to teach. Therefore, the system retains the professional enthusiasts and the seriously industrious who must still strive.

There are, of course, other aspects of this matter. Some may think that married women who teach will have few, perhaps no children. The fact that they are earning and have probably saved some money certainly cannot influence unfavorably the size of family. Some may think that the married and the unmarried may separate into classes. On the contrary, each married woman whom I have known has drawn the unmarried women about her. Lowered salaries are said to result. This cannot be so, for the married woman has two family circles into which to escape, her own and her husband's in case the salary becomes unendurably small.

For myself, I believe that the objections to married women are traditional. The teacher begins young and unwedded. "Let her become a State helot, a temple virgin, for life." Only yesterday, a teacher came to me as a candidate. "I have taught," said she, "eleven years in such-and-such a place. I began at four hundred. I am now getting fifty dollars more." "But," I asked, "why did you not leave long ago?" "I have had five offers; but my board never releases a teacher: we sign a year's contract with no notice allowed." She could never get a release.

From the slavery of such contracts, from the entire body of traditions that teachers are hirelings, from the narrowness of forced singleness, the women teachers in America should appeal. All teachers, men and women alike, need the freedom of the conditions of professional service and relationships, the freedom of experts serving for fees and honoraria, and the freedom of whatever state of marriage or celibacy we choose. For we have the right,—the right as soon as we ourselves see it,—to be men and women in a world of men and women.

Let us, therefore, employ on their merits the expert married teachers, preferring the mother who is excellent to the maiden who is only fair. In short, let the cities and towns accept the sanity of the villages and of the county districts, while retaining their own elevated requirements of professional education.

There are, as Quintilian showed, laws to praise and laws to censure. And the laws to censure are the laws to change.

The Juvenile Library in Brooklyn.

A remarkable showing for the juvenile circulation of library books appears in the report of Clara Whitehill Hunt, superintendent of the Children's Department in the Brooklyn Public Library. According to this statement, the total juvenile circulation for 1905 was 949,591 volumes, an increase of 238,353 over that of 1904.

This is an unusually large number, especially when it is remembered that the public school children of Greater New York are probably better supplied with good reading by their Board of Education than those of any other city. So great is the demand for books that the opening of new buildings has little effect in pulling down the juvenile circulation of the old branches.

Along with the increase in quantity of the circulation has come a steady improvement in the character of the reading matter issued to the children. It is no longer necessary to urge the children's librarians to push the best books and ignore the mediocre. They are doing this so eagerly, with so much enthusiasm, tact, and good sense that more critical standards are constantly growing, and the poorer class of literature is being spontaneously discarded by the children.

Since the organization of the children's department three years ago, seven Carnegie buildings, with beautiful, spacious children's rooms have been opened; large children's rooms have been added to the Montague and Ridgewood buildings and nine remaining branches have either moved into new quarters or have made decided changes in arrangement or decoration. An excellent "library order" is maintained in this department of the institution and the atmosphere is one of quiet and freedom.

The single fact that 79,132 books each month—books of a wholesome and inspiring character—have found their way into the homes of Brooklyn children speaks sufficiently of the work which this department of the Brooklyn Library is carrying on.

Brentano' are announcing for early publication "Italian Romance Writers," by Joseph Spencer Kennard. The work is essentially a translation of Dr. Kennard's "Romanzie Romanzieri Italiani," which was published in Florence about two years ago, and was immediately and enthusiastically hailed by Italian and French critics as the best critique extant on the Italian writers of fiction. Dr. Kennard traces the genesis of fiction in the Italian literature, establishing its connection with the universal human tendency to story-telling; and, beginning with Alexander Manzoni, in the early nineteenth century, considers chronologically the outstanding Italian fictionists, including Massimo, D'Agreglio, Ippolito Nievo, Edmondo De Amicis, Antonio Fogazzaro, Giovanni Verga, Anna Neera, Grazia Deledda, and Gabriele D'Annunzio. By comparing author with author and work with work, and Italian productions with the works of non-Italian writers, he differentiates the Italian literary genius from that of other peoples, and exemplifies, by the history of Italian fiction, the laws and processes that underlie the never-ending conflict between classicist and romanticist, between idealist and naturalist. Not the least valuable and interesting are the sidelights which are thus let in on the lives and minds of the Italians themselves. It is curious and interesting that Dr. Kennard, tho an American, has published more in Italian and French than in English, and that the vogue of his Italian fiction is second only to that of D'Annunzio himself.

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About twenty paper sail boats, decorated with flags and laden with merchandise representing the products of America, England, Ireland, Italy, Spain, Germany, and Turkey, were also shown.

On the charge of incompetency, Pres. T. B. Pray, of the Stevens Point Normal School, La Crosse, Wis., was discharged by the State Board of Normal Regents. The resolution declaring the position vacant at the close of the present school year was unanimously adopted.

Boston Method of School-House Construction.

Below are given the rules for building construction as laid down by the Boston Board of Education, which are carried out in all parts of the city. The information covers primary, grammar, and high schools. The rules are incorporated in the very excellent annual report of the School-house Department.

General Deductions.

All buildings are to be fireproof (so-called first-class construction) thruout; cost limited by allowing from 30,000 cubic feet for a large Primary to 35,000 cubic feet for a small Primary, and 22 cents per cubic foot; by allowing a sliding scale of cubic feet per class-room for Grammar and 22 cents per cubic foot; common red brick and stone for the exteriors, and the smaller the building the less the ornament; the grounds outside the building from 25 to 40 square feet per pupil, to contain playgrounds, planted spaces and gardens, and to be as open as possible for daily use; to this one may add the experimental figures for estimating cost of High Schools, varying from 82,000 cubic feet per class of forty in a small high school to 66,000 cubic feet per class of forty in a large building, and the addition of two cents to the cost per cubic foot, making it 24 cents for the High Schools.

General Information for First-Class Construction.

PRIMARY AND GRAMMAR SCHOOLS.

SCHOOL-ROOMS.

(1) *Size* will be 24 by 30 Primary and 26 by 32 Grammar and not less than 13 feet in clear. Modification allowable only after consultation with the Board. Every room shall be numbered on the plans to designate it.

(2) *Windows* will be on the long side for left hand lighting. The glass shall contain not less than 1-5 of floor area, about 160 square feet for a room 24 feet wide; neither double run of sash nor double glazing will be required, but a dust proof weather strip; the head square and close to the ceiling; the sill about 2 feet 6 inches from floor; the windows divided with muntins, no large sheets of glass; finished with plaster jamb, no architrave, metal corner bead.

(3) *Doors.*—One to corridor, 3 feet 6 inches by 7 feet, partly glazed, to open out, placed preferably near the teacher's end; brass-plated steel butts, 3-lever mortise lock, master-keyed; cast-brass knobs, marble thresholds to fireproof corridors. Doors to have 2-inch plain brass numbers and card holders 3½ inches by 5 inches.

(4) *Floors* will be Georgia pine rift, or maple.

(5) *Walls* will be painted burlap up to top of blackboards or of tack boards, and above this plaster, tinted in water color; the blackboards 4 feet high; 2 feet 2 inches (in Kindergarten), 2 feet 4 inches to 2 feet 6 inches from floor in Primary, and 2 feet 6 inches to 2 feet 8 inches in Grammar; behind the teacher and on one long side in Primary, and behind the teacher on long side and end in Grammar and High. These will be of best black slate, ¼-inch thick. In Primaries a rack or tack board for holding cards is required above the blackboard. A picture-molding at top of burlap and also near ceiling in both Primaries and Grammars.

(6) *Ceilings* will be level, plaster, no paint nor tint.

(7) *Lights.*—Six groups of four lamps each and light for teacher's desk; electric, no gas.

(8) *Heating and Ventilation.*—The inlet for heat about 5 feet square, the outlet for ventilation about 5 square feet for gravity system and 3 square feet for fan.

(9) *Bookcase.*—Provide a bookcase in any convenient position, capable of containing 300 octavo volumes; upper doors fitted with pin tumbler locks, and latch and knob; drawers fitted with pin tumbler locks. Lower doors to have pin tumbler locks; same lock in each bookcase; all bookcase locks master-keyed.

(10) *Map Supports.*—Provide one map support for each class-room in Grammar Schools, preferably behind the teacher's desk or opposite the windows, fixed close to the ceiling.

(11) *Teacher's Closet.*—Provide a small closet for teacher's coat and hat, preferably opening from the class-room, but allowable from the wardrobe.

WARDROBES.

(1) *Size.*—Wardrobes will adjoin school-rooms and be from 4 feet 6 inches to 5 feet wide.

School Gardening in the Boston Normal School. Use of the Cold Frame.

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SCHOOL-ROOMS.

(1) *Size* will be 24 by 30 Primary and 26 by 32 Grammar and not less than 13 feet in clear. Modification allowable only after consultation with the Board. Every room shall be numbered on the plans to designate it.

(2) *Windows* will be on the long side for left hand lighting. The glass shall contain not less than 1-5 of floor area, about 160 square feet for a room 24 feet wide; neither double run of sash nor double glazing will be required, but a dust proof weather strip; the head square and close to the ceiling; the sill about 2 feet 6 inches from floor; the windows divided with muntins, no large sheets of glass; finished with plaster jamb, no architrave, metal corner bead.

(3) *Doors.*—One to corridor, 3 feet 6 inches by 7 feet, partly glazed, to open out, placed preferably near the teacher's end; brass-plated steel butts, 3-lever mortise lock, master-keyed; cast-brass knobs, marble thresholds to fireproof corridors. Doors to have 2-inch plain brass numbers and card holders 3½ inches by 5 inches.

(4) *Floors* will be Georgia pine rift, or maple.

(5) *Walls* will be painted burlap up to top of blackboards or of tack boards, and above this plaster, tinted in water color; the blackboards 4 feet high; 2 feet 2 inches (in Kindergarten), 2 feet 4 inches to 2 feet 6 inches from floor in Primary, and 2 feet 6 inches to 2 feet 8 inches in Grammar; behind the teacher and on one long side in Primary, and behind the teacher on long side and end in Grammar and High. These will be of best black slate, ¼-inch thick. In Primaries a rack or tack board for holding cards is required above the blackboard. A picture-molding at top of burlap and also near ceiling in both Primaries and Grammars.

(6) *Ceilings* will be level, plaster, no paint nor tint.

(7) *Lights.*—Six groups of four lamps each and light for teacher's desk; electric, no gas.

(8) *Heating and Ventilation.*—The inlet for heat about 5 feet square, the outlet for ventilation about 5 square feet for gravity system and 3 square feet for fan.

(9) *Bookcase.*—Provide a bookcase in any convenient position, capable of containing 300 octavo volumes; upper doors fitted with pin tumbler locks, and latch and knob; drawers fitted with pin tumbler locks. Lower doors to have pin tumbler locks; same lock in each bookcase; all bookcase locks master-keyed.

(10) *Map Supports.*—Provide one map support for each class-room in Grammar Schools, preferably behind the teacher's desk or opposite the windows, fixed close to the ceiling.

(11) *Teacher's Closet.*—Provide a small closet for teacher's coat and hat, preferably opening from the class-room, but allowable from the wardrobe.

WARDROBES.

(1) *Size.*—Wardrobes will adjoin school-rooms and be from 4 feet 6 inches to 5 feet wide.

School Gardening in the Boston Normal School. Use of the Cold Frame.

(2 and 3) *Windows and Doors.*—Outside light; two doors, both connecting with school-room and not to corridor, and having no thresholds. Doors, double swung, 2 feet 6 inches wide, brass double acting butts, foot and hand plates, hooks or adjustable stops to hold open, ventilation under door farthest from vent.

(4) *Floors* as in school-rooms.

(5) *Walls.*—Painted burlap up to hook rail; poles on brass-plated iron brackets with hooks under and pins over, 56 in number. Shoe-rack and umbrella clip below. Walls above, plaster, tinted. Height of lower pole, Kindergarten, 30 inches from floor; Primary, 36 inches to 40 inches; Grammar, 44 inches, 48 inches, and 52 inches; distance between poles, 8 inches for Primary and Grammar, 12 inches for High Schools.

(6) *Ceiling.*—Plaster. No tint.

(7) *Light.*—One lamp. Ceiling outlets, electric.

(8) *Heating and Ventilation.*—Heating, direct. Ventilation, direct, 1⅔ square feet area across section.

CORRIDORS AND VESTIBULES.

(1) *Size.*—Not less than 8 feet wide for four rooms on a floor; not less than 10 feet for over four rooms, governed by length, access to stairs, etc.

(2) *Windows.*—Outside light essential.

(3) *Doors.*—Outer doors to open out, heavy butts, standard, master-keyed, school lock; door check; heavy hooks to hold open. Vestibule doors open out, heavy butts, pulls, push plates, hook to hold open, door checks, no locks.

(4) *Floors.*—Tile, terazzo, or granolithic.

(5 and 6) *Walls and Ceilings.*—Painted burlap, 7 feet high, untinted walls and ceilings. Finish burlap with painted line or a dado cap, and put picture molding at ceiling in corridors.

(7) *Light.*—Ceiling lights, two lamps each, electric, also gas for emergency in corridors, on stairs, and in vestibules.

(8) *Heating and Ventilation.*—Heat, direct. Ventilation, none.

(9) *Sinks and Closets.*—On each floor above the first one or two 4-foot sinks and emergency closets; one for boys and one for girls.

STAIRCASES.

(1) *Number and Arrangement.*—Determined by building laws, but fireproof construction in all cases.

(2) *Material.*—The treads, North River stone on iron string, or concrete construction with granolithic surface. Rails of a simple pattern, easily cleaned; wall rails not necessary.*

(3) *Steps.*—About 6½ or 7 inches by 10. Rail not less than 2 feet 8 inches on runs and 3 feet on landings.

SANITARIES.

(1) *Size.*—General toilet-rooms in basement, in size approximating space for 3 water-closets for each school-room, two girls', one boys', and 36 inches of urinal for every school-room, arranged for convenient supervision and circulation. Slate sinks, length from ten inches per class-room in small buildings to 6 inches per class-room in large buildings, located preferably in the play-rooms. In large schools the number of closets may be considerably reduced, especially on boys' side. The above refers to mixed schools.

(2) *Windows.*—Ample outside light; glazed where exposed to view outside with factory ribbed glass.

(3) *Doors.*—The doors arranged "in" and "out," with spring or door check and stout brass hooks to hold open; glazed with ripple or ribbed glass; half-doors to water-closets except where ordered omitted.

(4) *Floors.*—Asphalt. Boys', drained to urinal, girls' to floor-wash.

*In many schools the children are required to file in the ter of the stairs and to keep away from the walls. Where s is the rule a rail on the wall appears needless.

(5) *Walls.*—Salt-glazed brick, or other non-porous inexpensive surface, 7 feet high; above, brick painted.

(6) *Ceiling.*—Untinted plaster or whitewashed concrete. No basement ceiling need be furred level.

(7) *Light.*—Ceiling lights in groups of three lamps.

(8) *Heat and Ventilation.*—Heat direct. Ventilation thru fixtures back of urinals, and 10 square inches local vent from each water-closet.

MASTER'S AND TEACHERS' ROOMS.

(1) In each Grammar School a room of about 240 square feet for the master, with a water-closet and bowl and a book-closet adjoining. This room should be near the center of the building, *i.e.*, on the second floor in a three-story building. In all schools, a room or rooms for teachers, averaging about 300 square feet for ten teachers, with one water-closet and bowl for each ten.

(2) Where men as well as women are teachers, a separate small room with toilet accommodations for men.

(3) Opportunity in teachers' rooms for warming luncheon, either gas or electric, unless there is a cooking-room in the building.

PLAY-ROOMS.

(1) All free basement space to be arranged as play-rooms for boys and girls. Salt-glazed brick, 7 feet high, and painted or whitewashed brick or stone walls above. Asphalt or cement floors, plaster ceilings or whitewashed concrete.

PLUMBING FIXTURES.

(1) *Water-closets.*—The basement water-closets for primary and grammar schools are short hopper closets; elsewhere, a heavy wash-down closet.

(2) *Slate Partitions.*—Supported at ends with iron pipe about 8 feet high, tied together and to the wall, to which doors are hung.

(3) *Urinals.*—The urinals will be of slate, floor slab, trough and back, without partitions, flushed automatically thru ⅞-inch perforated pipe, with hot and cold water; vented at bottom into space behind.

(4) *Sinks*, of black slate, self-closing cocks, set 15 inches on centers, and cup-hooks at each side of cocks.

(5) *Floor-washes* in sanitaries, as already mentioned.

(6) (*a*) *Piping.*—Cast iron, must be in trenches in basement, running trap with direct indirect fresh-air inlets, clean-outs at every change of direction. Soils and vents exposed as far as possible, no asphaltum, but oil-tested, red lead and three coats paint.

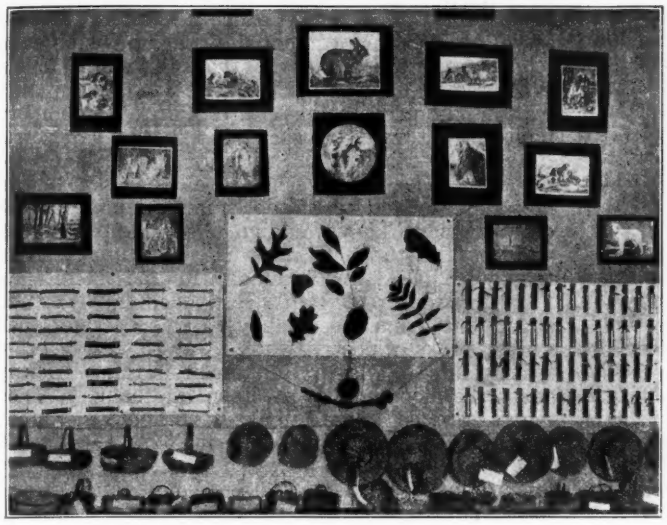
(*b*) *Supplies.*—Exposed as far as possible; where covered may be lead, elsewhere brass, no nickel-plate. Hot water for janitor's use in basement; for urinal, cooking-room, and, if convenient, for master's and teachers' rooms. Supply from boiler and from summer boiler, if any, or from a gas heater, or from cooking-room range.

(*c*) *Fire Lines.*—In first-class buildings over 3 stories high, one or more lines of 3-inch pipe.

Special Rooms.

ASSEMBLY HALLS.

(1) Assembly halls should accommodate the whole number of pupils in smaller Grammar buildings, but it is not customary in the larger schools to seat over 800 or 900. The platform should be capable of accommodating one, or, in the large schools, two classes, and should have removable stepped platforms of wood to take the benches. Galleries may be used where the hall is two stories in height. Anterooms near the platform are desirable; and a connection from adjoining class-rooms to the anterooms or directly to the platform. A dignified architectural treatment of the walls and a studied color scheme is expected. The hall floor will be level. The lighting



Wall Decorations of a Rural School in Nehama County, Neb.
G. B. Carrington, County Superintendent.

and acoustics should be such as belong to a small lecture hall.

MANUAL TRAINING ROOMS.

(1) *Size.*—Room, generally located in basement, should be approximately of dimensions equivalent to a class-room and its wardrobe, preferably a corner room; and arrangement, shown by drawings, for number of benches there given, 28.

(2) *Light.*—The windows should be as near full length as possible and on two adjacent sides. Artificial light should be provided in six groups of four lamps, as in class-rooms, or individual light for each desk. The latter is preferable where the occupation of room for manual training is permanently fixed.

(3) *Heat.*—Heat and ventilation the same as in class-rooms.

(4) *Stock-room.*—Stock-room should contain at least 80 square feet, preferably long and narrow. Two 18-inch shelves should run around the room, 5 feet 6 inches and 6 feet from the floor.

(5) *Wardrobes.*—Wall space for 30 hooks, not necessarily a separate room.

(6) *Teachers' Closet.*—Teachers' closet should be large enough to be used also for storage of finished work, and should be fitted with all shelving possible as well as with the customary coat-hooks. An area of 40 square feet is adequate.

(7) *Bookcases.*—Like those in class-rooms.

(8) *Blackboards.*—Blackboard space of about 30 running feet, 4 feet high.

(9) *Workrack.*—About 28 feet long, 6 feet 6 inches high, and 2 feet deep.

(10) *Washbowl.*—A 3-foot sink is a convenience, but not a necessity.

(11) *Finish of Room.*—A basement room should be finished as a shop; salt-glazed brick up to 7 feet where exposed, and above, brick walls whitewashed; if above the basement, finished as a class-room. The floor is of wood.

(12) *Furniture.*—(Not included in the contract.) The furniture comprises 28 benches and stools, 4 display frames about 6 feet long and 30 inches wide, demonstration steps and guard rail, teacher's desk, table 4 feet by 2½ feet with unfinished top, one desk chair and two common chairs.

COOKING-ROOM.

(1) *Size.*—Should have an area equivalent to class-room and its wardrobe, preferably a corner room.

(2) *Light.*—As much light as a class-room, but not necessarily left hand; if located in a corner, light from two sides. Artificial light as in a class-room.

(3) *Heat.*—Less heat is required than in a class-room, but the ventilation should be the same, with additional vent from the demonstration ranges.

(4) *Wardrobes.*—Provision for 28 pupils, clothes hooks in separate lighted closet and small teacher's closet.

(5) *Interior Finish.*—Above basement, similar to school-rooms, blackboard 4 by 10 feet, back of teacher's desk. Walls and ceilings painted in oils. A basement room may have salt-glazed brick walls up to 7 feet and whitewashed brick above. The floor of wood.

(6) *Tile.*—The floor space occupied by the ranges and the wall space back of them (include sides if in recess) to a height of 7 feet, unglazed red tile or salt-glazed brick.

(7) *Fittings.*— (*a*) *Work Benches,* accommodating 28 pupils, fitted with compartment for utensils, bread board, etc., a Bunsen burner with a hinged iron grill over it, set on aluminum plates at each station; benches arranged in the form of ellipse, or oblong, with access to center from two sides; top of pine 26 inches wide; open underneath and supported on pipe standards. One section detached and fitted as a demonstration bench; a clear space of 4 feet all around. Dining table (furnished under another contract) is to be set in center.

(*b*) *Dresser.*—Ten feet long, in three sections, 4 adjustable shelves and glazed sliding or hinged doors at top; one set of 3 drawers and 2 cupboards on lower part.

(*c*) *Fuel-box.*—In 2 compartments, each about 24 inches square and 30 inches deep, with hinged lids; small shelf in one section. Buildings having cooking-rooms should have special accommodations in the main coal-room for a supply of range coal and kindling wood.

(*d*) *Bookcase.*—Similar to those provided in class-room.

(*e*) *Sink.*—Soapstone, 5 feet long; 2 cold and 2 hot-water cocks; drip shelves 24 inches long at each end of sink. Sinks should be near ranges.

(*f*) *Hot-water Boiler.*

(*g*) *Coal and Gas Ranges.*—A six-hole coal range and a similar gas range with hood provided and set on a hearth, previously mentioned.

(*h*) *Refrigerator.*—Will be a part of the furniture.

KINDERGARTEN.

(1) *Size.*—The rooms can be contained in the space of a class-room and wardrobe, but a slightly larger area is desirable. They comprise a large room, a small room, a supply closet, wardrobe, teacher's closet and a water-closet, and bowl or sink.

(2) *Light.*—Windows should be as in a class-room, if on a corner, on both sides. Exposure should be sunny. Artificial light of the class-room type, arranged for the different rooms.

(3) *Heat.*—Heat and ventilation as in class-rooms.

(4) *Large Room.*—The large room should take a 16 foot circle, regulation lines painted on the floor, with at least 4 feet all around it when doors are open into small room.

(5) *Bookcase and Blackboard.*—Like a primary class-room.

(6) *Small Room.*—About 200 square feet, with a blackboard opposite window, and wide doors opening into large room.

(7) *Wardrobe.*—Hooks for 60. Arranged as in ordinary wardrobes.

(8) *Teachers' Closet.*—For clothing of two or three teachers.

(9) *Toilet-room.*—With seat and bowl or sink.

(To be continued.)

Hitting the Mark.

Mr. Willard Giles Parsons, in the April *Atlantic Monthly* has made one of those brilliant and incisive studies of a modern educational perplexity which must excite the interest and awaken the reflection of every serious observer of conditions, whether specialist or layman. "Making Education Hit the Mark" is the title of Mr. Parsons' article. His study concerns itself chiefly with two questions: What is the mark? and How can it be reached?

It is possible that his handling of the first of these topics will make the more forcible impression of the writer's lucid and original style of analysis. It divides the aims of public education into two—cultural and vocational. To this division of aims corresponds, he says, a like division of the subjects of study, some being properly cultural, others properly vocational. To it, again, corresponds a division of kinds of study—for cultural study, as a rule, is general and broad; while vocational study, as a rule, is special and minute. Vocational studies train to produce; cultural studies, to appreciate. The proper result of vocational study is skill; of cultural study, taste.

That this is not merely a formal division, Mr. Parsons' argument makes sufficiently clear. The confusion of these aims, he declares, is the chief cause of the present blindness in our education. Nearly every course in every school tries for both at once and consequently misses altogether. It must be said, and it must be repeated with every insistence and emphasis, that each aim should be kept pure.

Of course, taste results from a vocational course, —a vocational subject taught with a vocational aim, —to a slight degree; and, likewise, to a slight degree, a cultural course—a cultural subject taught for a cultural aim—results in skill. Taste and skill are not wholly disjunct. Taste must try its hand before it can fully appreciate; and skill cannot produce well till it has learned to judge. But the point is that in aim the two are separate, that the routes leading to the two are different routes, that the skill which results from a cultural course, the taste which results from a vocational course, are by-products, not included in the aim, but wholly adventitious. They are not to be rejected; but they are not to be sought.

The deliberate and mischievous intertangling of these two aims results on the one hand in a vocational training which is scholastic and ineffective, on the other hand in a cultural training which is devitalized of its most essential element. The vocational courses talk too much of inculcating virtue. It is not virtue one wants in his carpenter or his lawyer, but virtuosity. Vocational courses must make themselves practical, they must look out into the world and see what it wants of them. Manual training should place its products on sale, and fill orders for work it is prepared to do; business and professional training should secure business and professional work. In the old days of apprenticeship the learner was up against the market from start to finish. His world was *the* world, and he moved about in it until he knew it as it was. Nor will any one contend that the work of those days—the days of Peter Vischer and Botticelli—was inferior in virtue, beauty, ideality, to the work of today.

The cultural courses, on the other hand, do not give true, vital taste. They talk too much about scientific methods and exactness of knowledge. Analysis may furnish taste a reason (tho only the pedagog cares what it is), but it cannot give taste birth.

The charge is, perhaps, especially applicable to the high school. Take it, for instance, in literature. How many learn to love Homer? What boy takes his Aeneid with him to the woods, to read? There is something pathetically ludicrous, the writer observes, in the sure, complaisant way in which the schools assure themselves that they are teaching love. What sensible person could expect Tom, Dick, and Harry, gathered from homes of Puritan gloom or philistine glitter, not to speak of Egyptian darkness, to fall in love, at sixteen, with *Lycidas* or the *Commemoration Ode?* If the schools really meant to teach love, they would choose a gentler incline up the slopes of Parnassus. They would go down into the valley and meet the student in his own loved haunts; thence they would lead him gradually up the mountain, progressing step by step. But, even if we could expect the average schoolboy to love on sight the sudden peaks of poetry, what a way to take of presenting him to them! Suppose it is this: "How sweet the moonlight sleeps upon this bank." The school says: "Parse, analyze, paraphrase, name figure of speech, and then,—don't fail!—enjoy!" But the schools have no real intention of teaching love. Single teachers, scattered here and there, have; but they cannot. For the school will not allow them, having forgotten the value of love, of taste, of art, and being wholly given over to the lust of the scientific, the analytic, the exact. The boy who can scan and parse his Shakespeare passes, tho he be blank and cold to the poetry and feeling. But the boy who cannot parse and scan fails, tho he read with understanding and feel with inner fire. For feeling is subjective (as they say), illusory, and unstatistical, while parsing is a science, and so worth teaching. But—do we not know it in our sore and wearied souls?—in things of culture, in things of art, much knowledge, without love, is as sounding brass.

Having thus sharply and precisely indicated the cultural and the vocational provinces of education, and the penalties which govern their confusion, Mr. Parsons proceeds to the second division of his criticism—the order and advance of learning, that is, the *method* by which learning is achieved. Here he perceives the same disastrous disorder of elements which should be kept separate and intact. The first cause of this he imputes to the expansion which the imported German scientific spirit has undergone on American soil. The accomplishment previous to college is much greater in Germany than here. There, on entering a university, students possess a sufficiently broad acquaintance and power of observation; they are ready for analysis and theory, as American students are not.

Instead of remedying this discrepancy by increasing the acquaintance and observation of the student, either lengthening his term of preparation for college or postponing to later years in college the advent of analysis and theory, educators deepen the error; finding that college students cannot do the analytic work they require, they demand that the high schools train in analytic methods. Thus the vocational aim of the graduate school in subjects of culture is thrust downward thru the college and high school, and even permeates the grammar school, so that the whole of education from start to finish has become a matter of analysis and theory.

The subject in which the grammar school contravenes most sharply the order of learning is, perhaps, grammar. For grammar being the analytic and theoretical study of language, does not belong in the grammar school at all.

The scientific classification of phenomena cannot begin until the phenomena have been assembled and made familiar. To this law of learning language is no exception. The language study proper to the grammar school is observation and acquaintance, that is, more particularly, practice in reading, speaking, composing. Nor for this is the study of grammar necessary. What is necessary is a very large amount of practice; much reading, much

speaking, much composing. The only use of grammar here is a negative one, namely, to correct mistakes. And for this negative purpose the only person in the grammar school who need know grammar is the teacher.

As a matter of fact the entire work of the grammar schools in grammar is useless, while the language study proper to that period is thrust out, neglected, and lost. Correctness in reading, speaking, composing, is nowhere attained. Our very colleges are filled with students who cannot speak or write English correctly, but instead are busy criticising Arnold and De Quincey, Tennyson and Browning!

Mr. Parsons buttresses his argument with a number of well drawn illustrations from facts which daily array themselves before the most inexperienced eyes. In conclusion he says:

"Machine-mad, we have gone far toward making education also a machine. Is it not enough? Shall we not make education once again to live? Shall we not maintain the order of learning, and insist that observation and acquaintance precede analysis and theory? * * * Side by side with skill, shall we not reinstate taste as an aim and strive to make it a result? Shall we not acknowledge the fundamental distinction of goal and the folly of trying to aim two divergent ways at once? Shall we not, in other words, seek to make education hit the mark?"

During the year 1907 a great International Naval, Military, Historical, and Industrial Exposition will be held on and near the waters of Hampton Roads, Virginia, within twenty minutes' ride of the Cities of Norfolk, Portsmouth, Newport News, Hampton, and Old Point Comfort, Virginia, in commemoration of the three hundredth anniversary of the first permanent English settlement at Jamestown, Virginia, in 1607.

In this connection the National Educational Association has been invited to hold its next National Convention in the City of Norfolk during the progress of the Exposition. The section is the most historic on the American continent, and is rightly termed the "Cradle of Liberty." During ordinary times the vicinity bordering on Hampton Roads possesses attractions to warrant its selection as a meeting place, while during the Exposition period the natural advantages will be augmented by many other attractions. The Jamestown Ter-Centennial Exposition will differ from other expositions, inasmuch as it will have a distinct naval feature in a great international naval rendezvous. The military and historical features will also be conducted on a surpassing scale.

The Exposition management will be prepared to furnish the Association with a commodious and satisfactory hall for convention purposes and will, if desired, recognize their presence by setting apart a special day in honor of the occasion.

Concerning Arbor Day.

Some interesting points are to be found in a circular sent out by the United States Department of Agriculture on the subject of Arbor Day. After calling attention to the urgent need of compensating in some measure for the great quantities of timber cut down every year and the advancing price of lumber, it gives some very lucid and valuable instructions in regard to the planting of trees:

"The permanent results of Arbor Day from the standpoint of successful planting have frequently been disappointing. Too often species entirely unsuited for either economic or ornamental planting have been used. Still more common causes of failure have been the lack of sufficient care in doing the work. In this way much of the educational value of the work is lost.

"The right time to plant in spring is when the ground has ceased to freeze and before budding begins. Evergreens may be planted somewhat later than hardwoods. The day to plant is almost as important as the season. Sunny, windy weather is very unfavorable; cool, damp days are the best. For this reason it is well to leave the date for Arbor Day unfixed, so that the best opportunity may be chosen. Such exercises as are desired can follow when the planting is done.

"The careful selection of trees for a specific use and situation is essential to success, and proper planting is equally important. Tho less fastidious than agricultural crops in their demand upon the soil, trees cannot be set in a rough soil at random and then expected to flourish. They should be planted without allowing their roots time to dry out from exposure to the air. When delay between procuring the trees and their planting cannot be avoided, the roots must be kept moist by standing them in a "puddle" made of earth and water mixed to the consistency of cream, or "heeled-in" by nearly burying them in fresh earth. In setting the trees it is important to place them about three inches deeper than they stood originally, and to spread out the roots and pack the soil firmly about them. Two inches of soil at the top should be left very loose, to act as a mulch to retain the moisture.

"Large trees are by no means always the best to plant. Small seedlings may be secured easily and cheaply, and are much more likely to live. If these are set out in good number after the pattern of a commercial plantation they will become in due time a true forest on a small scale."

School Equipment and the Educational Trade.

Under this head are given practical suggestions concerning aids to teaching and arrangement of school libraries, and descriptions of new material for schools and colleges. It is to be understood that all notes of school supplies are inserted for purposes of information only, and no paid advertisements are admitted. School boards, superintendents, and teachers will find many valuable notes from the educational supply market which will help them to keep up with the advances made in this important field. Correspondence is invited. Address letters to *Editor of* THE SCHOOL JOURNAL, 11-15 East 24th Street, New York City.

The largest order ever given for one text-book came recently from the United States Government, when it ordered 100,000 copies of N. S. Reimould's book on educational work in the Philippines. The books were packed in zinc lined boxes, and are now on their way to the islands.

Mr. Reimould has had two years of experience in teaching in the Philippines. He lately resigned a principalship in Lincoln, Ill., to do editorial work for a New York publishing company.

Teachers of science are invited to visit the sample room of the Henry Heil Chemical Co., 210-214 South Fourth St., St. Louis, and view their chemical apparatus, one of the most complete displays of its sort in the country. A catalog of their goods will be sent on application.

What is probably San Francisco's first order for books since the earthquake and fire is reported by Fox, Duffield & Company. The volumes wanted are SUCCESSFUL HOUSES, by Oliver Coleman, and ONE HUNDRED BEST HOUSES. Another evidence that 'Frisco is going to rebuild.

The business and affairs of the American School Furniture Company have been taken over by the American Seating Company, a corporation recently formed under the laws of New Jersey. The executive office has been removed to 94 Wabash Ave., Chicago; the New York sales office remains at 19-21 West 10th Street, in charge of J. F. W. Gatch. Prompt attention to the wants of old and new customers is assured by the new management.

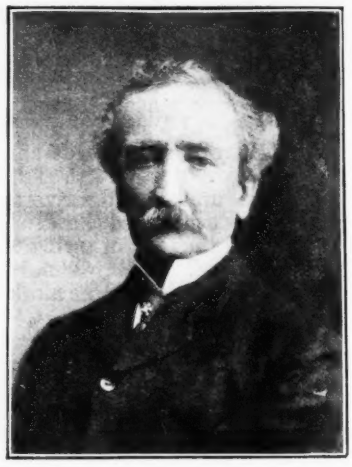
Mr. Gunnison, who for six years has been with Silver, Burdett & Co. in the Metropolitan district, and who has taken charge of the high school list in this territory, has accepted a position with Allyn & Bacon Co., at 30 Union Square. He will henceforth manage their interests in the Metropolitan district.

Before Mr. Gunnison's departure the Silver, Burdett people gave a farewell dinner at the Aldeine Club in his honor.

The E. J. Johnson Company, 38 Park Row, New York City, have this year further enlarged their facilities for turning out slate blackboards. They endeavor to take care of all business in this line with dispatch, overcoming the serious delays which are incident to production on a smaller scale. Their blackboard quarry is located at Bangor, Pa., and has a reputation thruout the country for the strength of its slate and the smooth and lasting finish of its blackboards. This concern has also recently added to its various plants an unfading green quarry from which they are producing a superior grade of roofing slate of this color.

Those who are interested in technical education will find it worth while to glance at the cut on this page representing a complete tool kit for automobilists. The make-up of these outfits is an art by itself, requiring a high degree of forethought and skill. The kit here represented contains forty tools. The price for tools and cabinet is $20. The automobile outfits, together with tools for all sorts of trades, are sold by Hammacher, Schlemmer & Co., Fourth Ave. and 13th St., New York City.

At the meeting of the Eastern Manual Arts Association, to be held at the Teachers College, on the 31st of May and the 1st and 2d of June, there will be an exhibit of crayons and drawing pencils manufactured by the Joseph Dixon Crucible Company. Mr. G. H. Reed—everybody knows him, of course,—will be in charge of this interesting display. He will show also pencil and crayon work by pupils in the public schools of New York City as well as in schools in the State of Pennsylvania. These specimens reveal some remarkable

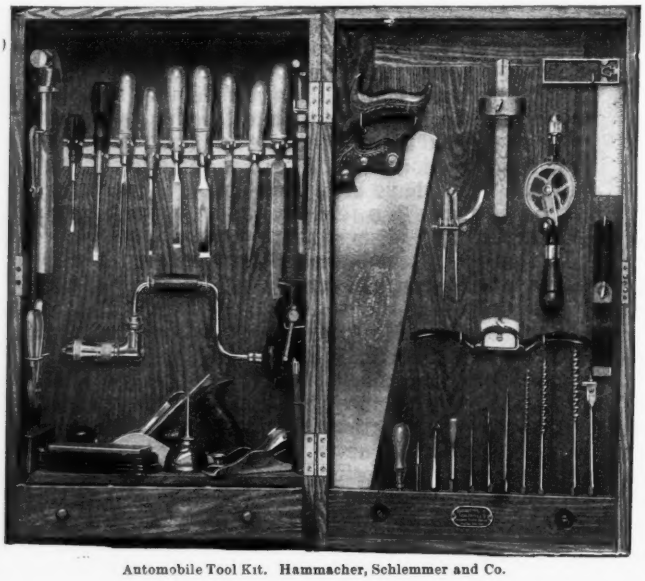


John A. Walker, Vice-President and General Manager, Dixon Crucible Co.

results achieved with Dixon pencils and crayons. The latter being made in both wax and pastel form, can be used either wet or dry and permit of a great variety of effects. Samples of the Dixon pencils are to be given to the visiting teachers, and Mr. Reed and his associates will be on hand to dispense full information about these materials. The exhibits will be in Room No. 221 adjoining the Manual Training Rooms and the Auditorium.

C. S. Hammond & Co. have moved from 163 Broadway to 152 Broadway. Their new offices will give them greater facilities for their map and atlas business, which they report to be steadily increasing. Their modern atlas of the world has passed thru four large editions within the first year of its publication. They announce that their new catalog of map and atlas publications containing full descriptions of their new school maps, is now out.

D. Appleton & Company announce the appointment of M. H. D. Bartlett, superintendent of schools of Medina, N.Y. as their New York State representative. His long experience as principal and superintendent at schools, and his intimate knowledge of the conditions and requirements of New York schools give him especial fitness for his new position.



Automobile Tool Kit. Hammacher, Schlemmer and Co.

Remington Typewriter at Algeciras.

The Algeciras Conference is over and the peace of the world is again assured.

Not the least interesting development at Algeciras from the standpoint of those interested in typewriters was the part "The Peacemaker" played in the Conference. By "The Peacemaker" we mean the Remington Typewriter, which has earned the title by reason of having successively written the first draft of the Peace of Paris between Spain and the United States in 1898, the Articles of Agreement between the British and the Boers at Pretoria in 1902, and the first draft of the Peace of Portsmouth between Russia and Japan in 1905.

No less than eight Remingtons were used at Algeciras and they constituted the sole typewriter equipment of the plenipotentiaries. Of these eight machines, seven were equipped with the universal keyboard and were used by European and American delegates. The eighth machine, however, was the most interesting of all. It was one of the new Arabic Remingtons which was furnished for the special use of the representatives of Morocco. This new Arabic Remington is a remarkable machine. It works with a reverse carriage action, it builds up all kinds of compound characters, it has keys which single space,

others which double space, others which do not space at all. Altogether it is a new triumph of the typewriter builder's art, and it is already finding a ready market in many Oriental countries.

Teachers who are desirous of keeping up with the times will be interested in looking over the educational catalog of Houghton, Mifflin & Co. for 1906. To arrange a list of books in catalog form in such a way as to make a readable booklet is a fine art. The Houghton, Mifflin catalog is essentially readable from beginning to end, besides being an invaluable list to the up-to-date teacher.

The Lathrop Name.

A dispute has been going on between the Lathrop Publishing Co. of Boston and the Lathrop, Lee & Shepard Co., of the same city, which was finally carried to the Supreme Court of Massachusetts. The quarrel centered on the right of the latter company to use the name "Lathrop." The Lathrop Publishing Co. two years ago assigned for the benefit of its creditors. The assignee disposed of the property to the Lee & Shepard Co., and subsequently the concern known as the Lathrop, Lee & Shepard Co. was formed.

The Supreme Court refused the plea of the Lathrop Publishing Co.that the use of their name be denied the other firm. They held that the purchaser of the property had a right to use the name as a designation of the publications that had previously borne its imprint, and to advertise as the successor in the business so purchased.

Catalogs Received.

Program for Arbor Day, Rhode Island Department of Education, 1906.

Bulletin of the State Normal School, Johnson, Vermont, 1906.

Catalog of John Lane Co., 1906.

Marietta College Bulletin, March, 1906.

Bulletin of Syracuse University, April, 1906.

Announcements of the University of Chicago, March, 1906.

Clarkson Bulletin, Thomas S. Clarkson Memorial School of Technology, April.

Annual Report of the Board of Education, Kansas City, Mo., year ending June 30, 1905.

Twenty-fifth Annual Catalog of Coe College, Cedar Rapids, Iowa, 1905-06.

Spring Announcements and Recent Publications, Little, Brown & Co., 1906.

Where to Go Fishing, Grand Rapids and Indiana Railway, Grand Rapids, Mich.

L. C. Page & Co.'s Tentative Announcement of New Publications for 1906.

Leland Stanford Junior University Register for 1905-1906, April, 1906.

Mr. Murray's List of Forthcoming Publications, April, 1906.

Modern Book Illustration, James S. Conant Company, 125 Summer St., Boston.

Annual Report of the School Committee, Wellesley, 1905.

The Monthly List, Macmillan Co., May, 1906.

The Fifth Annual Report of the Women's Auxiliary of the Massachusetts Civil Service Reform Association, 1906.

Eighth Annual Report of the Brooklyn Public Library, 1905.

Manual and Course of Study of the Millersburg, Pa., Public Schools, 1906.

Monthly Record of Scientific Literature, The D. Van Nostrand Co., N. Y., March and April, 1906.

Report of the Indiana State Normal School for the Year Ending October 31, 1905.

Eleventh Annual Report of the John Crerar Library, for 1905-1906.

Report of the Minister of Public Instruction of New South Wales, for 1904.

Traveling Libraries are a First Step in Developing Libraries, by Gratia, A Countryman, 1905.

Catalog of Talladega College, Talledega, Ala., 1905-1906.

Report of the Minister of Education, Province of Ontario, for the Year 1905, Parts I and II, 1906.

Morningside College Bulletin, Sioux City, Ia., 1905-1906.

The Annual Report of the School-house Department, Boston, 1905-06.

Denison University Annual Catalog, Granville, Ohio, 1905-06, 1906.

Notes of New Books.

AMERICAN POEMS from 1776 to 1900, gathered by Augustus White Long, is a book containing the best American poems published during the existence of our Republic, from the days of Philip Freneau and Francis Scott Key to and including Dr. Van Dyke, James Whitcomb Riley, and Frank Dempster Sherman. It is a treasure house worthy of a place in every school-room. The very best poems of America are to be found in this volume. The editor is preceptor in English at Princeton University and joint-editor of the well-known "English Poems from Chaucer to Kipling." His judgment as to what is best along this line may well be considered authoritative. The comprehensive notes and brief biographical sketches add materially to the value of the book, which may well become as much of a standard for school-room use as is the well-known collection by Edmund Clarence Stedman for the library table. (American Book Co., New York.)

The Pitmans have recently published a SHORT COURSE IN SHORTHAND. It is arranged in forty lessons, and is designed for use in business colleges, high schools, and for self-instruction. Each lesson forms a separate leaflet, with rules, suggestions, and exercises, and the course is sufficiently complete so that a student who has mastered it is master of stenography. It is recommended as convenient and practical in form, and is certainly so in content. (Isaac Pitman & Sons, New York.)

Ginn & Co. have recently brought out a revised edition of THE LABORATORY ASTRONOMY by Robert, Wheeler Willson, professor of astronomy in Harvard University. High school and college people generally are familiar with the old edition of this laboratory manual, and for them it is only necessary to say that the new edition is larger than the old by the addition of four chapters on the following topics: The Nautical Almanac, The Celestial Globe, Examples of the Use of the Globe, The Motion of the Planets.

To those unfamiliar with the book, it may be added that the manual is intended primarily for teachers, but much of it is suitable for use as a text-book. It is meant to be used in connection with any one of the text-books on descriptive astronomy adapted to high school pupils. The methods employed can be carried out with fair-sized classes, and do not require a place of observation favored with an extensive view of the heavens. Simple apparatus for measuring altitude and azimuth together with a few maps, and diagrams, will supply all that is necessary for the practical work planned to be done by pupils. (Ginn & Co., Publishers, Boston. List Price, $1.25.)

Louise Connolly, Superintendent-Elect of Summit, N. J., Miss Connolly has been superviser of the grammar schools of Newark, N. J.

Probably no one is better fitted to write the life of a teacher than one who has known him intimately as one of his pupils. Among the biographies of schoolmasters that have appeared recently, two stand out as recording the lives of marked men. The first of these is the life of Prof. Edward North; the second MEMORIES OF A GREAT SCHOOL MASTER, by James P. Conover. The schoolmaster whose life is so lovingly recorded by Mr. Conover is Dr. Henry A. Coit, founder and for many years head master of St. Paul's School, at Concord. There is very little to be said about this study of Dr. Coit's life, save that it is the record of an honest, earnest teacher of boys—one who understood and loved every boy with whom he came in contact. As such it may well serve as an inspiration to teachers generally, and its suggestiveness to other teachers of boys will render its influence a great and prominent one. (Houghton, Mifflin & Co., Publishers, Boston, Price, $1.50.) (*Continued on page 576.*)

The Educational Outlook.

An advance of $50 a year is to be given to all the teachers in the six lower grades of the Cleveland, O., schools, if the plan now being prepared by the educational commission is accepted by the Board.

Prof. A. L. Archer, of Eastman, Ga., has been elected superintendent of the Toccoa, Ga., public schools for the coming year.

Mr. Archer has had ten years' experience in teaching and comes highly recommended for the position.

By unanimous vote, A. H. Yoder, professor of pedagogy in the Washington State University was elected Superintendent of Schools at Tacoma, Wash.

The Board in electing him increased the salary for the position by $500 a year, making it $3,250. The election is for a term of three years.

Prof. William Kirchbaum, for two years principal of the Washington, Pa., schools, has been elected School Superintendent, a newly-created office.

The board of education at Fredonia, N. Y., has decided to employ a male superintendent of schools for the coming year, and to give him the management of both the Eagle Street and the Barker Street schools which are now in charge of women. This will do away with the positions of lady principals.

Mr. Heath, of D. C. Heath and Co., has just returned from a trip to California.

The Commencement exercises of the Ursuline nuns were held at The Castle, New Rochelle, N. Y., on May 31. The Right Reverend Thomas F. Cusack, D. D., presided.

Dr. Haney to Rejoin N. Y. U. Faculty.

The School of Pedagogy of New York University announces that Dr. James P. Haney, director of arts and manual training in the New York City schools, who some years since was a lecturer on that Faculty will again become a member of its teaching force, offering a course of lectures in the fall on "The Teaching and Supervision of the Manual Arts."

Dr. Balliet, Dean of the School of Pedagogy, in speaking of the proposed course said recently, "The course will be planned to meet the needs of grade, departmental, and supervisory teachers who are anxious to familiarize themselves with the best methods of teaching drawing, construction, and design. Dr. Haney's experience has brought him into contact with many thousands of teachers and the practice he recommends is born of the study of the arts in many classrooms.

Besides the discussion of methods, Dr. Haney will present material of great value to special and departmental teachers of the arts, or those preparing themselves to undertake such work. This will include questions of organization and development of courses of study, principles of criticism, conference giving, and the personal element in teaching and supervision. In connection with the lectures in methods, the latter considerations will offer unusual opportunity to normal students and supervisory teachers to review the professional aspects of their work.

Plans for Pueblo High School.

The plans for the Pueblo Central High School show a building of great beauty.

The extreme length of the building is 330 feet and the width 142; the height is four stories seen from one side, and five as seen from the opposite side. There is a large central mass, having at either side two wings of lesser size. A dome similar to the one made famous in the illustrations of the Congressional Library at Washington is the crown. The main entrance is thru a portal of six grand pillars, supporting a portico two full stories in height. The pillared effect is carried out in the two wings.

The basement floor will contain the engine and boiler rooms, forge room, janitor's living rooms, supervisor's rooms, storeroom, and wheel room.

The ground floor will be used for gymnasium, armory, boys' and girls' lavatories, turning shop, general lunch-rooms, machine shop, carpenter shop, etc.

The second story contains the physical and chemical laboratories and science lecture hall; a large study hall; mechanical and free-hand drawing rooms with their storerooms; a cooking laboratory; a sewing room, and three recitation rooms.

On the third floor are the commercial and four recitation rooms. Much attention has been given to the heating and lighting of the building, and to securing such arrangement of the rooms as to cause the least possible loss of time in the passing of classes, or use of stairways.

The plans as they stand to-day embody three years' study on the part of Supt. J. F. Keating and much care and deliberation on the part of the architects and School Board.

An Average Day.

The Superintendent of Schools at Houston, Texas, writes a description of "an average day in an average school." The following are some of his impressions:

"The building was neither better nor worse than most of the others. The children that attended were the children of the people. Business and professional and laboring people were all represented among the patrons. The predominant strain was American.

"The first class which I heard on this particular day was a language class. The children were reading papers which they had written on the subject, "What I saw in a Street Car." They told enthusiastically and in clear, connected English, what they had actually seen and heard on Houston street cars. Some of the children said they had taken a ride on the cars for the purpose of seeing what they could see. Others said they were writing simply what they remembered from previous rides. The papers were neatly and carefully written. There were some errors, to be sure, for they were merely normal children. Nobody had seen anything astounding or miraculous.

"They had acquired, however, the ability to do two things which even a great many grown people have not learned to do: namely, to use their eyes to advantage, and then to tell in good English of the things they have seen.

"In the language recitation in another room the children were studying Dickens' 'Tale of a Star.' One little girl was giving it orally when I entered the room. Many a public speaker that I know of would be delighted if he could tell it as simply and sweetly, as smoothly and effectively as this little girl did. After she got thru, a bare-footed, freckle-faced boy repeated it, and did, in his own characteristic way, about as well as she had done in hers.

"The reading work, also, which I heard, was not like what would have been heard in such a school thirty years ago. The old style reader, with its 'the-cat-is on-the-mat' literature, is not so much in evidence as it once was. In one grade, I found the children reading at sight a supplementary geographical reader. It was a description of the country and customs of Holland, and had a bearing on their regular work in geography. They read with enthusiasm about the windmills and canals and wooden shoes of the people of that plucky little country, most of which lies below the level of the surface of the ocean.

"The geography, too, was an interesting feature. In one room I found that the children had been making 'product maps' of Europe. This meant that they had drawn large outline maps of Europe, and then had pasted upon the various countries little articles to represent the products. Bits of iron and pieces of wood pasted on the map of Russia indicated the iron mines and the forests of that country. There were bits of silk in France, a tiny piece of a knife blade for the cutlery of England, and a tiny olive in Italy. It is safe to say that the boys and girls who took the pains to get these things together will not be likely to forget soon the leading products of the nations they studied.

"At recess I noticed a number of boys and girls working on the large window-panes of the school-room. I found they were using their play-time in drawing outline maps of certain continents and

(*Continued on page* 577.)

Notes of New Books.

(Continued from page 572.)

Readers generally are familiar with the work of Prof. L. H. Bailey, of Cornell University, who is a specialist along the lines of plant life and nature study. The thoughtful student of nature and the would-be student of nature will enjoy particularly a very careful study from the pen of Professor Bailey, entitled PLANT BREEDING. The book is thoroly scientific, and yet the wonderful facts brought out by the author are so simply told that every page is within the comprehension of the ordinary reader.

The present edition of the work which is the fourth, has been carefully revised and contains an added chapter on current plant-breeding practice. The first edition of the book was issued in 1895. The material was given first as a series of lectures at Cornell, these lectures covering the following topics: The Effect and Philosophy of Variation; The Philosophy of the Crossing of Plants in Reference to Their Improvement under Cultivation; How Domestic Varieties Originate (a wonderfully interesting chapter); Recent Opinions (a resumé of the investigations of experts, with a statement of the current tendencies of American plant-breeding practice); Current Plant-Breeding Practice. The final chapter on Pollination, or How to Cross Plants, is of especial interest to the lay reader, because we have heard so much of Mr. Luther Burbank's wonderful results of cross breeding.

The scope of the work and the care with which it has been written will be comprehended from the fact that there are a hundred and ten pages of bibliography with reference to the subject, given as an appendix. (The Macmillan Company, New York. Price, $1.25.)

One of the Henry Holt Company's latest announcements is CITIZENSHIP AND THE SCHOOLS, by Prof. Jeremiah W. Jenks, of Cornell. Professor Jenks is widely known as a public man and scholar; he has contributed frequently on economic and political questions; he was chosen by the Government as an expert investigator of trusts and adviser to the Department of Labor, as well as special investigator for the War Department, of currency, labor, taxes, and police in the Orient; and he successfully undertook to reform the currencies of Mexico and China.

In the new book of this versatile student runs the thought of the possibility and desirability of combining with the practical sense and dynamic vigor of the successful business man and politician the noble ideas of the best civic life, and the author insists upon the duty of making real and vital to the child in the public schools his obligations to the State, and indicates how this can be done. His subjects include: The Social Basis of Education, Training for Citizenship, The Making of Citizens, Relation of Public Schools to Business, Education for Commerce, The Far East, Free Speech in American Universities, A Critique of Educational Values, Policy of the State Toward Education, School Book Legislation. (Henry Holt Company.)

Summer is coming on apace and with it the time when the weary teacher can throw down geography and arithmetic and take the time to have a hearty laugh. THE INTELLECTUAL MISS LAMB, by Florence Morse Kingsley, will go far towards helpi g on the laugh. It is the story of Miss Lamb, Ph.D., who was so absorbed in physiological psychology that her thoughts were far above more mundane affairs—and then she was asked to be maid of honor at a wedding, William Gregg to be best man on the same occasion. The inevitable resulted, and it took three years of effort on Gregg's part to bring it about. How it all happened is very funny and quite worth while reading. (The Century Company, New York.)

And now the Brownies have entered the school book field,—altho thus far they have gone only as far as the Primer. The text of the PALMER COX BROWNIE PRIMER was prepared by Mary C. Judd, while the illustrations are, of course, by Palmer Cox himself. I am wondering if there is any body so old as not to wish this book for a Christmas present. It is fun with the Brownies from the first page to the last. We go to school with the merry little men, we gather apples with them in the autumn, the wee folks saw wood for our delectation, they peep from Santa Claus' high boot, they go a-sleighing, build a snow man, sing America, learn to tell time, and many other things of supreme interest to primer boys and girls. The BROWNIE PRIMER is a charming addition to the list of books for beginners in reading. The more of our good friends, the Brownies, the better. (The Century Co., New York.)

A second edition of LEGENDS OF THE IROQUOIS by W. W. Canfield (A. Wessels Co.) has been issued, in which there appears a new legend, "The Four Winds." These tales, which seek to preserve something of the vanishing folk-lore of the Indian, originated in notes made on the blank pages of an engineer's field book. The unnamed author of the notes transcribed them from conversations which he had with the famous half-breed Seneca chief, the Cornplanter, of the period prior to the Revolution. These notes fell into Mr. Canfield's possession; and from them and from supplementary material he has evolved his versions of Iroquois folk-lore. The tales include a variety of poetic and fanciful explanations of such things as the beginnings of the arbutus, of Indian corn, of mosquitoes, of Winter, of the plumage of the turkey-buzzard, etc. The *Outlook* says of them: "The legends are retold in language rich in atmosphere and in sympathy with the reverential spirit in which the red men regarded their folk-lore." The book should supply suggestive and rich material in teaching children something of the inner life and traditions of the Indians.

Many practical hints on dress, heat, cold, etc., in their physiological effects are contained in CHILDHOOD AND GROWTH, a new book by Lafayette B. Mendel, professor of physiological chemistry at Yale.

The book opens with an introduction by Horace Fletcher, whose enthusiastic criticism is proof of its worth and of its place in a course of which he has long been the champion. (Frederick A. Stokes Company. Price, 60 cents, net; postpaid, 67 cents.)

A new addition to the wealth of Shakespearian literature has been made by Prof. Maurice Francis Egan, of the Catholic University of America. The work is in the form of a collection of articles, entitled THE GHOST OF HAMLET AND OTHER ESSAYS. Professor Egan pleads first, last, and always for a first hand study of the great dramatist's own work, to be followed by a thoro consultation of the best biographies and commentaries. No real student will accept the interpretation of another without having first formed an opinion of his own. This point is certainly well taken. Professor Egan is a sincere believer in Shakespeare's genius, and portrays in some detail the difference between the stage accessories of the Elizabethan theater, and those which the modern stage-manager may use for the "illumination" of his plays.

The discussion of "Hamlet" is scholarly and reasonable. The essay on Calderon, "Shakespeare's Greatest Contemporary" is a masterly plea for the great Spanish dramatist, who retained a tone of morality in his plays far above that of his younger contemporaries. Some of the other essays are entitled, "Some Pedagogical Uses of Shakespeare," "Imitators of Shakespeare," and "A Definition of Literature." This book should be in the library of every lover of Shakespeare. (A. C. McClurg & Co., Chicago.)

Many of the incidents in Ernest Poole's first novel, THE VOICE OF THE STREET, published by A. S. Barnes & Co., are from "real life," the author having lived for three years in the University Settlement in New York, studying the newsboys and the bootblacks by day and often in the small hours.

There are many books on teaching by well-known educators but in the publication of the new volume, SUCCESSFUL TEACHING, which will be ready in a few days, the publishers adopted a unique plan in order to produce a book which would give a comprehensive reflex of the methods of many practical teachers who are actively engaged in the teaching profession to-day instead of the views or theories of perhaps one man, as is usually the case with other books of a similar character.

Early last year a list of topics was drawn up which covered the subject of teaching in a broad, general way. The topics are: The Value of Psychology in Teaching; The Teaching of Phonetics; Nature Studies; The Various Methods of Teaching Nature; How Best to Gain and Keep Control of the Pupils; The Art of Story-Telling and Its Uses in the School-room; The Place of Biography in General Education; How to Teach Children to Think; The Advantages of Memory Work; The Value of Word Study and How to Direct It; How to Develop the Conversational Powers of the Pupil; The Educational Influence and Value of Manual Training; How Best to Acquaint Pupils With What Is Going On in the World; How Best to Teach Concentration; How Best to Develop Character in Children; Personality as a Factor in Teaching. These topics were submitted to the teaching profession thruout the country, and liberal prizes were offered for the best essays upon each. A large number of manuscripts were submitted, coming from all parts of the country. Each was anonymously signed, as awards were to be made on merit alone. While some were not of much value, the majority were original and thoughtful, and in many cases highly practicable. So high was the standard of several manuscripts on some of the subjects that the judges who made the awards had a delicate task in making selections. In every case practicability was the deciding consideration. The winning essays have now been incorporated in a book under the title SUCCESSFUL TEACHING. James M. Greenwood, Superintendent of Public Schools, Kansas City, one of the best known educators in America, has written a valuable introduction. This book will be of unique and striking value to the teaching profession, showing, as it will, the very latest and most successful methods now being employed by American teachers under different circumstances and conditions. (Funk & Wagnalls Company, New York. $1.00 net.)

(Continued from 575.)

certain states on the window panes, using ordinary soap as their drawing material. This certainly impressed these outlines upon their minds. If the teacher thought it best to have the maps washed away, the soap was already there for the purpose. If it were allowed to remain, the soap might perhaps still serve a useful purpose as a gentle hint to the janitor."

Pacific Manual Association.

The spring meeting of the Pacific Manual Teachers' Association was held at Pasadena, April 21. Dr. Millspaugh of the State Normal School at Los Angeles spoke upon "The Present Tendency," referring to the existing conditions and possibilities of manual training instruction. His talk aroused much discussion upon two chief lines; the proposition to adopt a prescribed course of instruction to be accredited to the State University and the desirability of forming a traveling manual training exhibit.

The teachers were practically unanimous in their opposition to the first of these two propositions, asserting that such a prescribed course of study would work hardships to both teacher and pupil and would tend to effectually deaden the entire work in the lower schools. The executive committee of the Association was directed to give the proposition a thoro investigation and report at the fall meeting. The other proposition met with general favor.

Pennsylvania School Funds.

Calculation of the amount of the State appropriation for schools in Pennsylvania to be allotted to each county has been completed by the Department of Public Instruction. On this basis the distribution of the appropriation for the school year, beginning the first Monday in June, 1906, will be made.

The State appropriates $5,550,000 a year to the public schools. Of this $237,500 goes toward the payment of tuition of students in the State Normal Schools and $100,000 for the maintenance of township high schools.

The distribution of school funds is based as follows: One-third on the number of resident taxables in each district; one-third on the number of children between six and sixteen years of age; one-third on the number of regularly employed teachers.

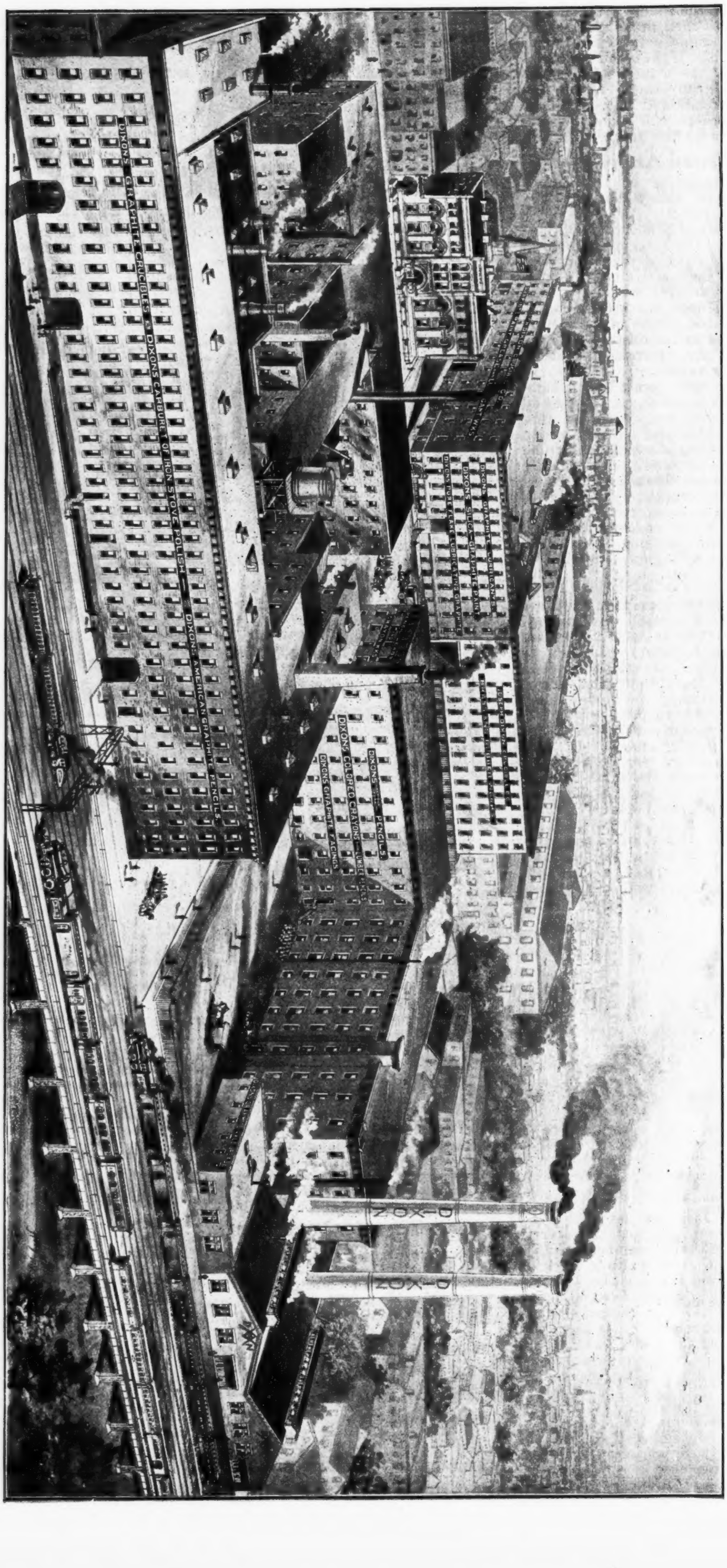
Following are the amounts allotted to the larger cities of the State for 1906 as compared with last year:

	1906	1905
Philadelphia	$833,749 30	$824,441 50
Pittsburg	230,744 97	227,569 72
Allegheny	93,091 40	95,211 00
Reading	63,217 31	61,085 71
Altoona	31,498 90	30,417 58
Johnstown	28,878 67	28,609 11
Harrisburg	37,857 16	38,266 04
Erie	43,005 84	42,429 98
Scranton	83,813 13	81,677 69
Lancaster	30,708 13	27,332 99
New Castle	20,923 51	21,648 35
Wilkes-Barre	38,074 35	38,752 89

A Nine Days' Howl in Chicago.

Mr. Wilbur S. Jackman, in the *Elementary School Teacher*, sarcastically scores the Chicago press and members of the School Board on their attitude toward school reforms and the new idea in general. His criticism springs from the condemnation which was hurled upon the reorganization scheme of Dr. De Bey, one of the members of the Board, both in the editorial columns of Chicago newspapers, and from Dr. De Bey's colleagues on the Board.

The distinctive features of the scheme were: (1) Redivision of the city into districts, each containing from ten to twenty schools; (2) organization of all the principals and teachers in each district; (3) these organized bodies to act in a supervising capacity in the direction of the educational affairs of the district;



The Dixon Crucible Company's Immense Plant at Jersey City, N. J.

(4) nomination of principals by the district organization of principals and teachers; the Superintendent to have power to veto, and the Board of Education the power to elect; (5) abolition of the Board of District Superintendents; (6) substitution for the present board, of six district superintendents, of twelve teachers holding principals' certificates, to be selected by the organized principals and teachers of each district; these teachers to serve as critics; (7) abolition of the promotional examination feature of the Normal School extension work, and the substitution of a differently organized merit system.

"As a study of human nature it is interesting to observe how these proposals were received," writes Mr. Jackman. "There was a great howl; nothing more intelligent, nothing more indicative of calm inquiry or of a disposition toward careful consideration—just a nine days' howl."

The people generally express themselves as being anxious for a "hard-headed business" administration of the schools, Mr. Jackman continues. Nevertheless the criticism which appeared in print was in direct contrast to the spirit of modern business methods. There is a firm in Chicago which pays a cash bonus to any employe who makes a suggestion which can be adopted with advantage to the firm's business. There is a manufacturing concern in Ohio which distributes recording devices to the employes, which they are invited to use as a means of bringing suggestions to the notice of the firm. Last year, out of some fifteen thousand suggestions a majority were carried into effect by the board of administration.

In other words, the far-sighted business policy of to-day leaves no stone unturned to secure the intelligent moral support of all the workers.

How is it with the Board of Education in this regard? No other organization on earth is so skittish towards suggestions from the outside, says Mr. Jackman. It has come to pass in most communities that if a teacher were to make a suggestion to a school board he would attract to himself unfavorable notice, if not suspicion; if he were to persist in such a policy, he would be snubbed and probably "transferred" as a warning of even more serious things in store.

The principle upon which the proposed plan rests is that every one participating in the educational work of the city from the Superintendent and the Board to the humblest teacher shall have the opportunity of co-operating and contributing to the common good of the schools up to the limits of his ability.

No one can object to this on theoretical grounds. The practical point that really rouses opposition is that it seals the doom of bossism in education. It substitutes for bossism and fear the idea of mutual consideration and co-operation. It not only provides for every one adequate opportunities for the development of new ideas, but it also secures to each the right to have his ideas duly considered, and to have a voice in determining whether they shall be carried out.

"Dr. De Bey's plan as yet is not understood," concludes Mr. Jackman, "but in the end the principle underlying it will win. The time when it can go into operation depends very much upon the teachers themselves."

Making Vegetables Tender.

Many people have a notion that a black soil must of necessity be a rich one. But, on the contrary, it may be almost devoid of nitrogen, and so stand in need of some fertilizer. Whilst it is true that garden soils in general have a sufficiency of both potash and phosphoric acid in them, the chances are that these two food materials are to a certain extent "locked up"—that is, they are not immediately available to the plant, and are only taken out by slow degrees. Therefore, the amateur gardener will find that the best all-round fertilizer for him to buy is one with an abundance of nitrogen, and moderate quantities of the other two substances. Of course, for large operations, special compounds of fertilizers are an economy, and, while the same thing holds good in theory on a small scale yet in practice, as the amount involved is so little, it is wiser to have one all-round fertilizer. Succulent vegetables particularly will thrive on nitrogen. It makes them grow rapidly, and that means tenderness. Potash is used to improve the quality. Phosphoric acid helps to build the tissue of the plant. What a fertilizer contains can always be ascertained by reading the analysis which must accompany it. Look only for those three terms. Don't regard anything else. How much to use? Of course, the answer largely depends on the grade of fertilizer. Stable manure can be spread on three inches thick. A pound of nitrate of soda is sufficient to cover from eighty to one hundred square feet.—May *Garden Magazine*.

Georgia Association.

The Georgia Teachers' Association will meet on Cumberland Island, June 21-23.

Here are some of the addresses to be given: "Rousseau and Education According to Nature," by Superintendent Evans of Augusta; "Industrial and Agricultural Education," by J. S. Stewart, University of Georgia; "School Teaching as a Profession," by Pres. R. W. Smith, Lagrange Female College; "The Private School," by W. B. Griffin, Stone Mountain; and "The Denominational High School," by Comer Woodward, Sparks Institute.

The sessions of the Association will be held during the forenoon and evening, so as to leave the afternoons free for fishing, surf-bathing, crabbing, etc.

Members of the Association will get hotel rates of $1.50 a day.